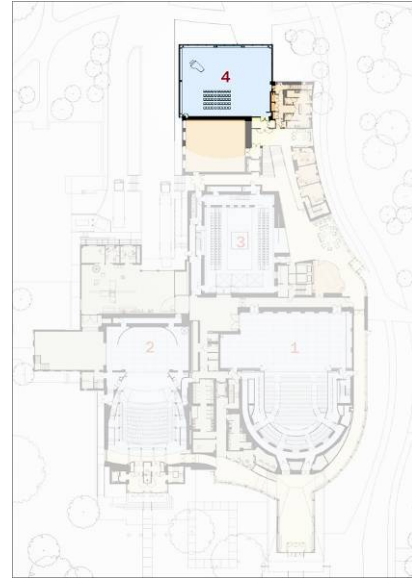


Space 1: Dance Rehearsal Studio (A large work space)

Conceptual Narrative:

The dance studio is a very utilitarian space with a need for uniform diffuse lighting. The current lighting in the space adequately lights the space for the necessary lighting levels and uniformity, however the space has a power density of $3.0\text{w}/\text{ft}^2$. Through slight modifications of the lighting system in the space, I will try to increase the overall efficiency of the system, reducing power density and number of fixtures that need to be relamped, while maintaining an average of 30fc over the floor.

There are two major systems in the space: a linear fluorescent indirect system, running at 277v and a halogen surface-mounted canister downlight system, running at 120v . The halogen canisters are currently positioned above the mechanical system, which traps a lot of the light at the roof and never makes it to the floor, 27 feet below. My plans are to:



1. *Remove the canister downlights.* In removing these downlights, it removes the need for dimmer panel DP-2 and a 120v feeder to this space, while reducing the power density. Through simulation calculations, it appears that the removal of these luminaires does little to the overall lighting level in the space.
2. *Exchange the current fluorescent lighting system with more efficient fixtures.* T5 lamps have the highest efficiency of the linear fluorescent sources, at 103.6 lumens/watt, higher than T8 lamps, at 92.2 lumens/watt, and T5HO lamps, at 92.6 lumens/watt. Also, the new luminaire chosen for the space has an efficiency of 93.0% , which is much more efficient than the efficiency of the previous luminaire, at 71.2% .
3. *Add wedge-shaped reflectors above the linear fluorescent luminaire rows.* This keeps the light from being lost in the mechanical system and increases the amount of useable diffuse light that reaches the floor.
4. *Rearrange switching zones.* Currently the space is switched in two zones, the west and east sides of the space. I propose to switch the north-most luminaires as a separate zone to allow for better control of the lighting when presentations are being given on that wall.

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Existing Conditions:

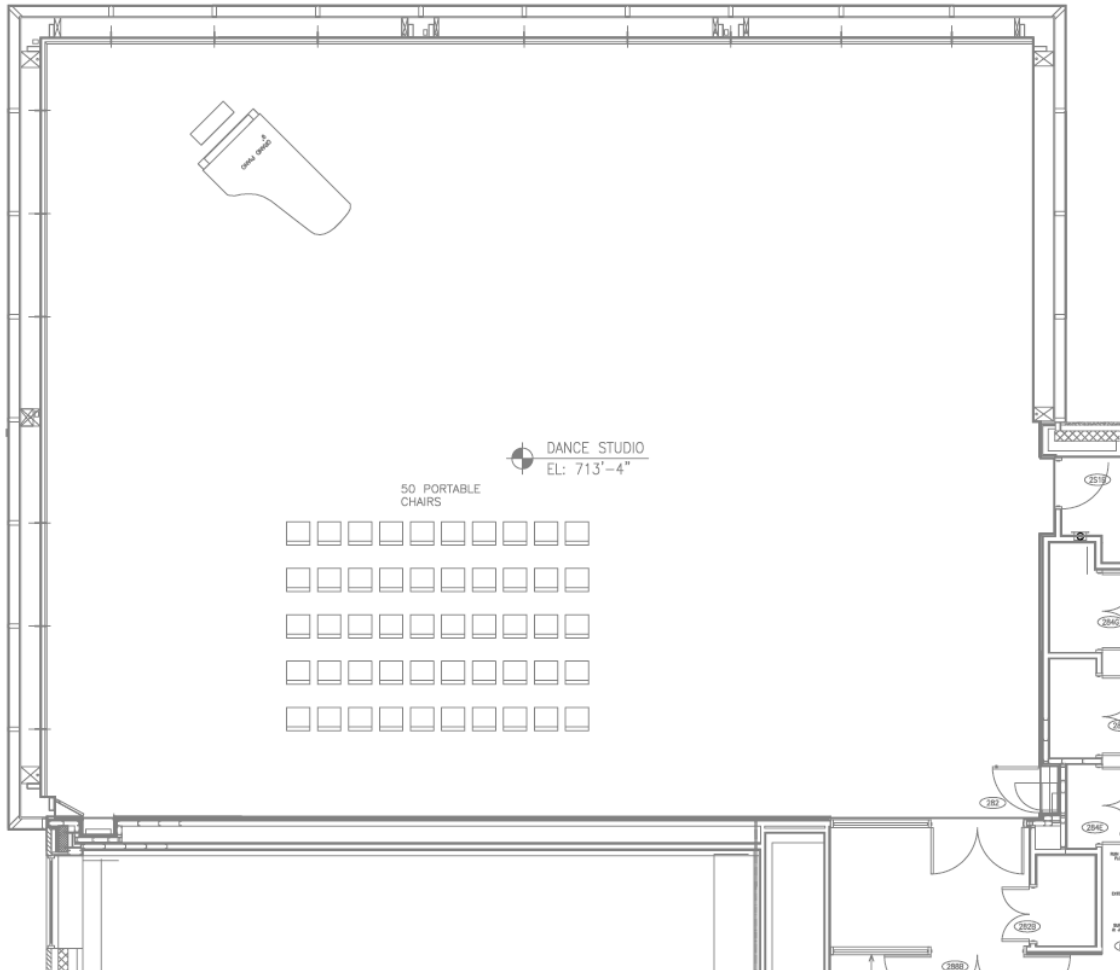


Figure 1.1 – Floorplan

Space Characteristics:

- Ceiling Height: 27'
- Area: 3250 sq. ft.
- Materials: Aluminum, Glass, Wood, Acoustical Wallboard

Assumptions about the Space:

- 18 month cleaning cycle
- Very clean
- RCR: ~5
- Horizontal illuminance measured at floor level

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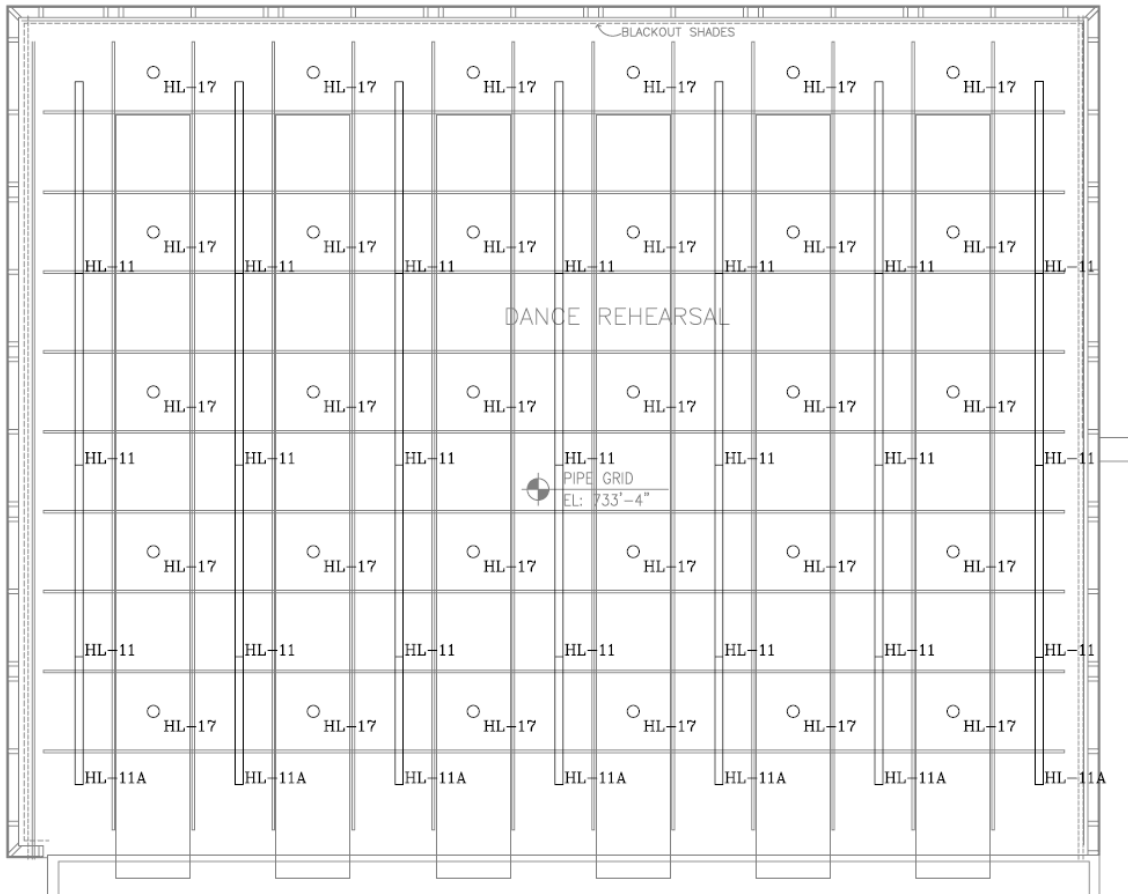


Figure 1.2 – Reflected Ceiling Plan (reference Appendix for luminaire types)

Light Loss Factors (Existing System)						
Fixture Type	Maintenance Category	LLD	LDD	BF	RSDD	Total LLF
HL-11	II	0.95	0.96	0.88	0.89	0.71
HL-17	IV	0.95	0.92	1.00	0.89	0.78

Table 1.1 – Light Loss Factors (Existing Layout)

Energy Modeling:

HL-11: 21 fixtures @ 276w = 5796w
 HL-11A: 7 fixtures @ 184w = 1288w
 HL-17: 30 fixtures @ 90w = 2700w
 Total LPD: 3.0w / sq. ft.

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Electric Lighting Levels:

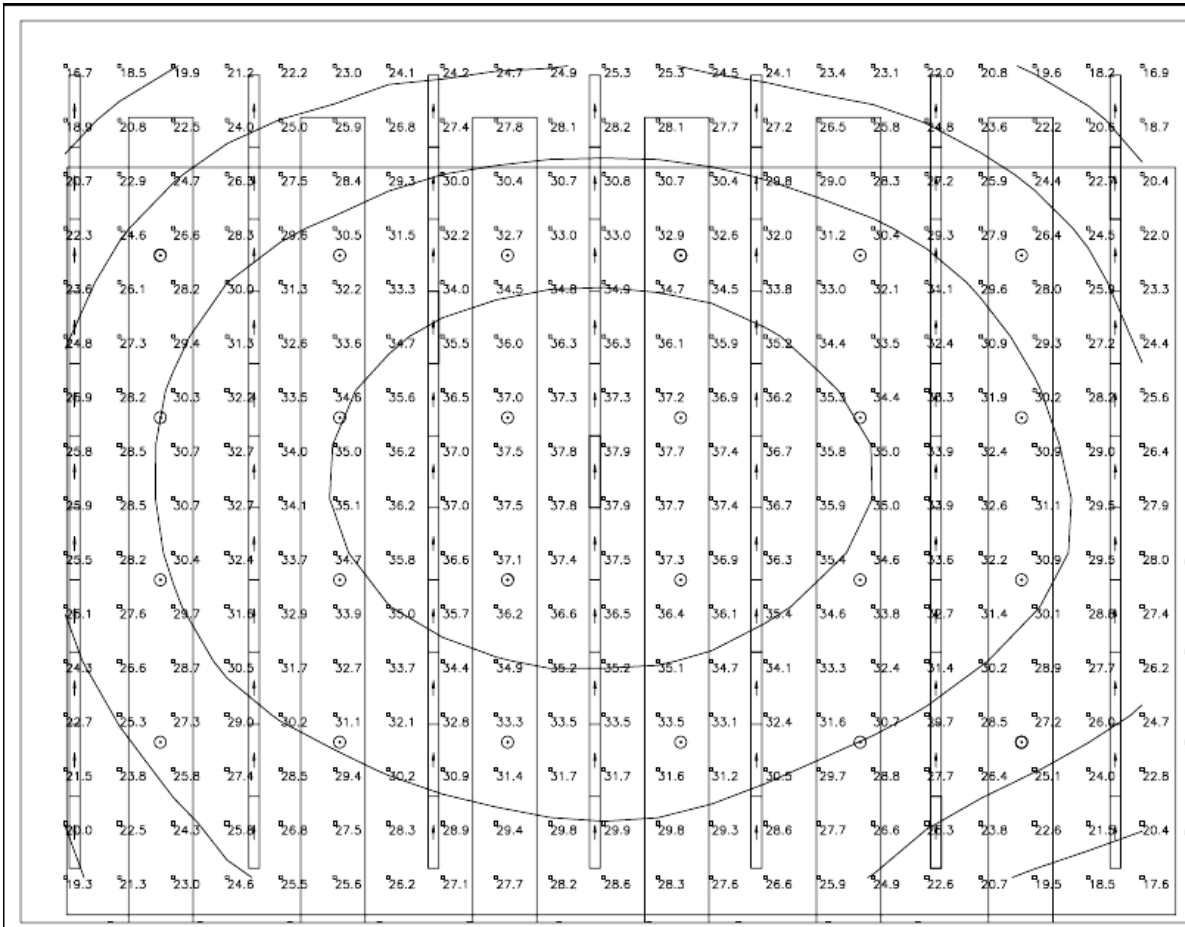


Figure 1.3 – Horizontal Illuminance Values & Isocontours

Illuminance Summary:

- Average Horizontal Illuminance: 30fc
- Max/Min Ratio: 2.3:1
- Average Vertical Illuminance: 39fc
- Max/Min Ratio: 1.4:1

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New Layout:

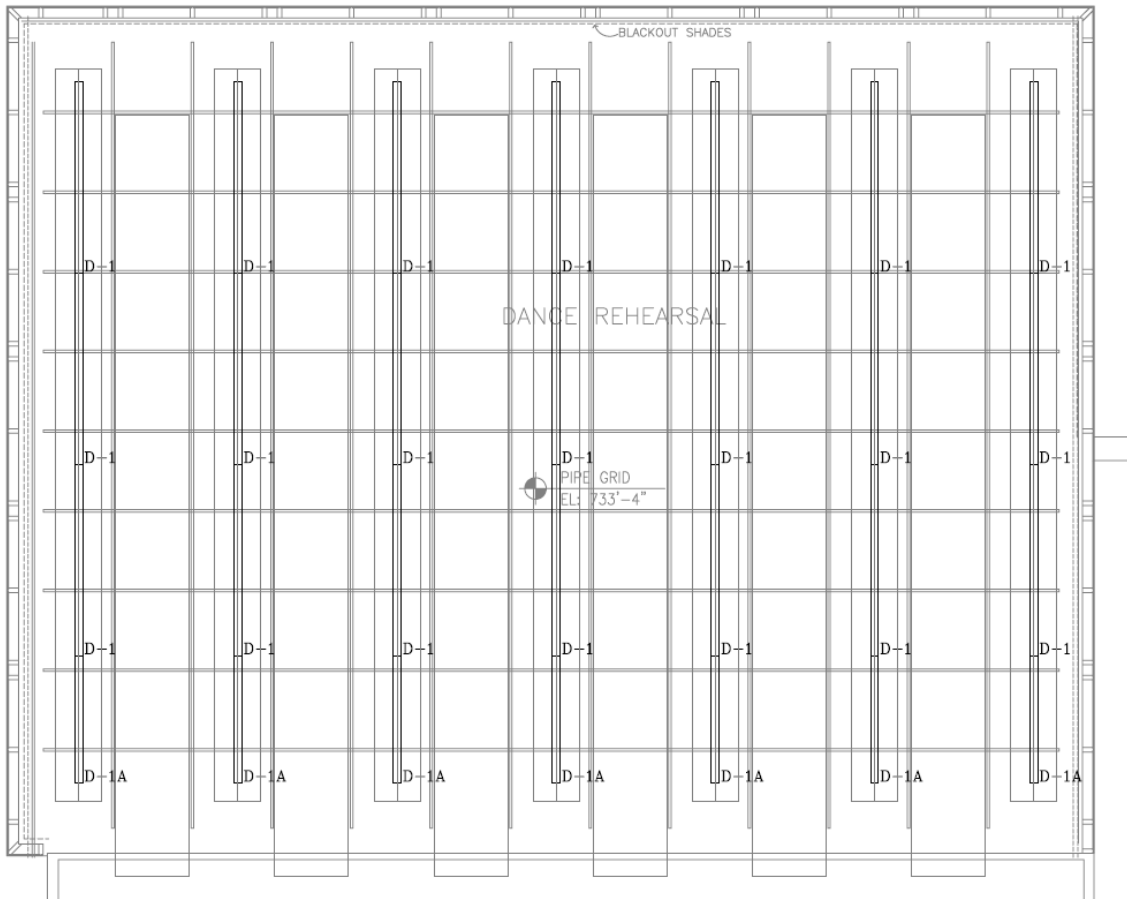


Figure 1.4 – Reflected ceiling Plan (reference Appendix for luminaire types)

Light Loss Factors (New System)						
Fixture Type	Maintenance Category	LLD	LDD	BF	RSDD	Total LLF
D-1	II	0.95	0.96	0.88	0.89	0.71

Table 1.2 – Light Loss Factors (New Layout)

Energy Modeling:

D-1: 21 fixtures @ 270w = 5670w

D-1A: 7 fixtures @ 180w = 1260w

Total LPD: 2.1w / sq. ft.

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Electric Lighting Levels:

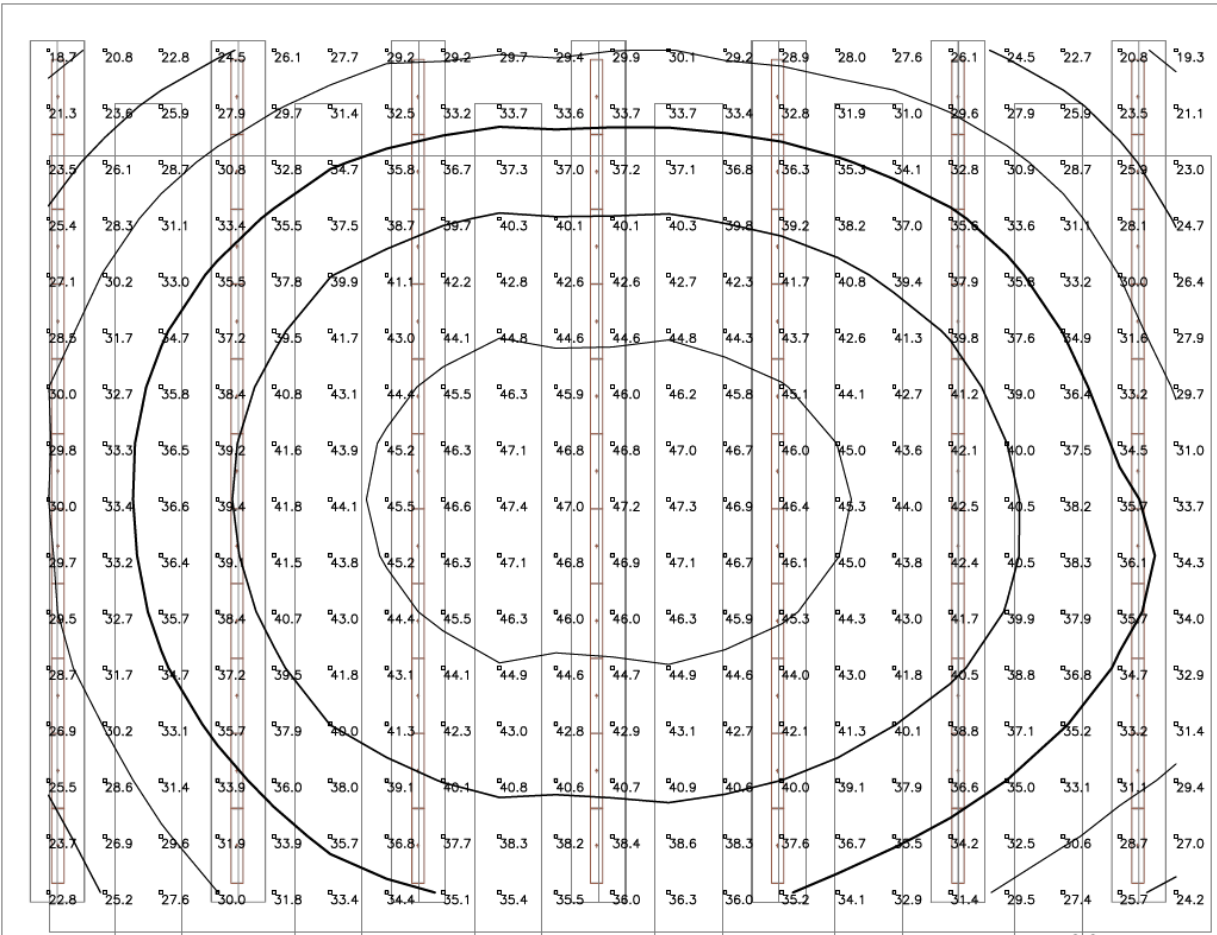


Figure 1.5 – Horizontal Illuminance Values & Isocontours

Illuminance Summary:

- Average Horizontal Illuminance: 37fc
- Max/Min Ratio: 2.5:1

[Add Photos Here]

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New Electrical Systems:

[Circuiting Plan Here]

Note: New circuits are those listed with loads. The MEP consultant on the job has refused to release the panelboard schedules and final electrical drawings and the panelboard schedules are not included in the construction documents set. As tallying loads for every circuit on the panelboards in question would be extremely time consuming, I've left them out for now. I'll attempt to get the information necessary, but otherwise I may need to assume loads based on the C/B size. However, I understand that using this method would result in a largely oversized feeder.

One panelboard, and the dimmer panel associated with this panelboard, has not been shown. However, the incandescent lighting loads that were in the dance studio have been removed from this panel, making dimmer panel DP-2 unnecessary and reducing the load on the panel which feeds this dimmer panel, PHGN, circuit #76, which is a 30A 3P breaker.

PANELBOARD SCHEDULE												
VOLTAGE: 480 SIZE/TYPE BUS: A COPPER SIZE/TYPE MAIN: 225A/3P MLO			PANEL TAG: LH3S PANEL LOCATION: Dimmer Room #356 PANEL MOUNTING: SURFACE						MIN. C/B AIC: 10K OPTIONS:			
DESCRIPTION	LOCATION	LOAD (WATTS)	C/B SIZE	POS. NO.	A	B	C	POS. NO.	C/B SIZE	LOAD (WATTS)	LOCATION	DESCRIPTION
Fluorescent Ltg	2nd Fl South	0	20A/1P	1	*			2	20A/1P	0	WTF Office	Fluorescent Ltg
Fluorescent Ltg	Black Box	0	20A/1P	3		*		4	20A/1P	0	3rd Fl South	CFL Downlights
0	0	0	20A/1P	5			*	6	20A/1P	0	Scene Shop	HID Canister
		0	20A/1P	7	*			8	20A/1P	0	Scene Shop	Fluorescent Ltg
0		0	20A/1P	9		*		10	20A/1P	3060	Dance Studio	Fluorescent Ltg
		0	20A/1P	11			*	12	20A/1P	2520	Dance Studio	Fluorescent Ltg
		0	20A/1P	13	*			14	20A/1P	0		
		0	20A/1P	15		*		16	20A/1P	0		
		0	20A/1P	17			*	18	20A/1P	0		
		0	20A/1P	19	*			20	20A/1P	0		
		0	20A/1P	21		*		22	20A/1P	0		
		0	20A/1P	23			*	24	20A/1P	0		
		0	20A/1P	25	*			26	20A/1P	0		
Spare	---	0	20A/1P	27		*		28	20A/1P	0	---	Spare
Spare	---	0	20A/1P	29			*	30	20A/1P	0	---	Spare
Spare	---	0	20A/1P	31	*			32	20A/1P	0	---	Spare
Spare	---	0	20A/1P	33		*		34	20A/1P	0	---	Spare
Spare	---	0	20A/1P	35			*	36	20A/1P	0	---	Spare
Spare	---	0	20A/1P	37	*			38	20A/1P	0	---	Spare
Spare	---	0	20A/1P	39		*		40	20A/1P	0	---	Spare
Spare	---	0	20A/1P	41			*	42	20A/1P	0	---	Spare
CONNECTED LOAD (KW) - A		0.00							TOTAL DESIGN LOAD (KW)		6.70	
CONNECTED LOAD (KW) - B		3.06							POWER FACTOR		0.99	
CONNECTED LOAD (KW) - C		2.52							TOTAL DESIGN LOAD (AMPS)		8	

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PANELBOARD SCHEDULE												
VOLTAGE: 480 SIZE/TYPE BUS: A COPPER SIZE/TYPE MAIN: 125A/3P MLO			PANEL TAG: ELH3N PANEL LOCATION: Emergency Closet #358 PANEL MOUNTING: SURFACE						MIN. C/B AIC: 10K OPTIONS:			
DESCRIPTION	LOCATION	LOAD (WATTS)	C/B SIZE	POS. NO.	A	B	C	POS. NO.	C/B SIZE	LOAD (WATTS)	LOCATION	DESCRIPTION
Fluorescent Ltg	Stair 13	0	20A/1P	1	*			2	20A/1P	0	Elev. Pent.	Fluorescent Ltg
Fluorescent Ltg	Stair 13	0	20A/1P	3		*		4	20A/1P	0	Scene Shop	HID Canister
		0	20A/1P	5			*	6	20A/1P	0	Act Studio	Fluorescent Ltg
		0	20A/1P	7	*			8	20A/1P	0	2nd Fl Corr	
		0	20A/1P	9		*		10	20A/1P	0	0	0
0	0	0	20A/1P	11			*	12	20A/1P	0	0	0
		0	20A/1P	13	*			14	20A/1P	1350	Dance Studio	Fluorescent Ltg
		0	20A/1P	15		*		16	20A/1P	0		
CFL Downlights	2nd Fl Corr	0	20A/1P	17			*	18	20A/1P	0		
CFL Downlights	2nd Fl Lob	0	20A/1P	19	*			20	20A/1P	0		
		0	20A/1P	21		*		22	20A/1P	0		
		0	20A/1P	23			*	24	20A/1P	0		
		0	20A/1P	25	*			26	20A/1P	0		
		0	20A/1P	27		*		28	20A/1P	0		
		0	20A/1P	29			*	30	20A/1P	0		
		0	20A/1P	31	*			32	20A/1P	0		
		0	20A/1P	33		*		34	20A/1P	0		
		0	20A/1P	35			*	36	20A/1P	0		
		0	20A/1P	37	*			38	20A/1P	0		
		0	20A/1P	39		*		40	20A/1P	0		
		0	20A/1P	41			*	42	20A/1P	0		
CONNECTED LOAD (KW) - A		1.35							TOTAL DESIGN LOAD (KW)		1.62	
CONNECTED LOAD (KW) - B		0.00							POWER FACTOR		0.99	
CONNECTED LOAD (KW) - C		0.00							TOTAL DESIGN LOAD (AMPS)		2	

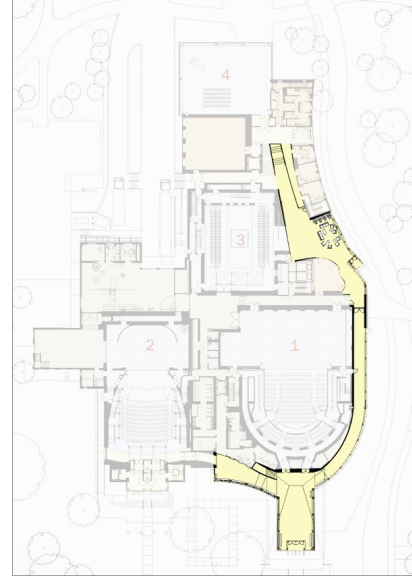
Space 2: Entrance Lobby (A circulation space)

Conceptual Narrative:

The entrance lobby is strongly infused with light from tungsten halogen and ceramic metal halide sources. The design concept which was paramount to this entry lobby was the idea of a glowing glass box, which would attract attention from the cars and pedestrians as they passed along the main street of Williamstown. To increase the phenomenological impact of the space, my design changes seek to keep the original design concept on the outside of the space, a glowing glass box that can be seen from the street, and then adjust the interior space to be drastically darker than expected. This decrease in lighting levels and the use of blue and purple color tones will set the tone for the audience members that they enter the space, calming them and putting them in a mindset of thoughtful introspection.

To achieve this concept in the space and to reduce the lighting power density of the space, I intend to implement the following:

1. *Change the exterior ceramic metal halide downlight to LED strip lights.*
2. *Remove the tungsten halogen uplights from the interior.*
3. *Add a system of fiberoptics in the ceiling to mimic a night sky.*
4. *Remove luminaires from entry doors to theatre and add luminous panels to door frame.*



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Existing Conditions:

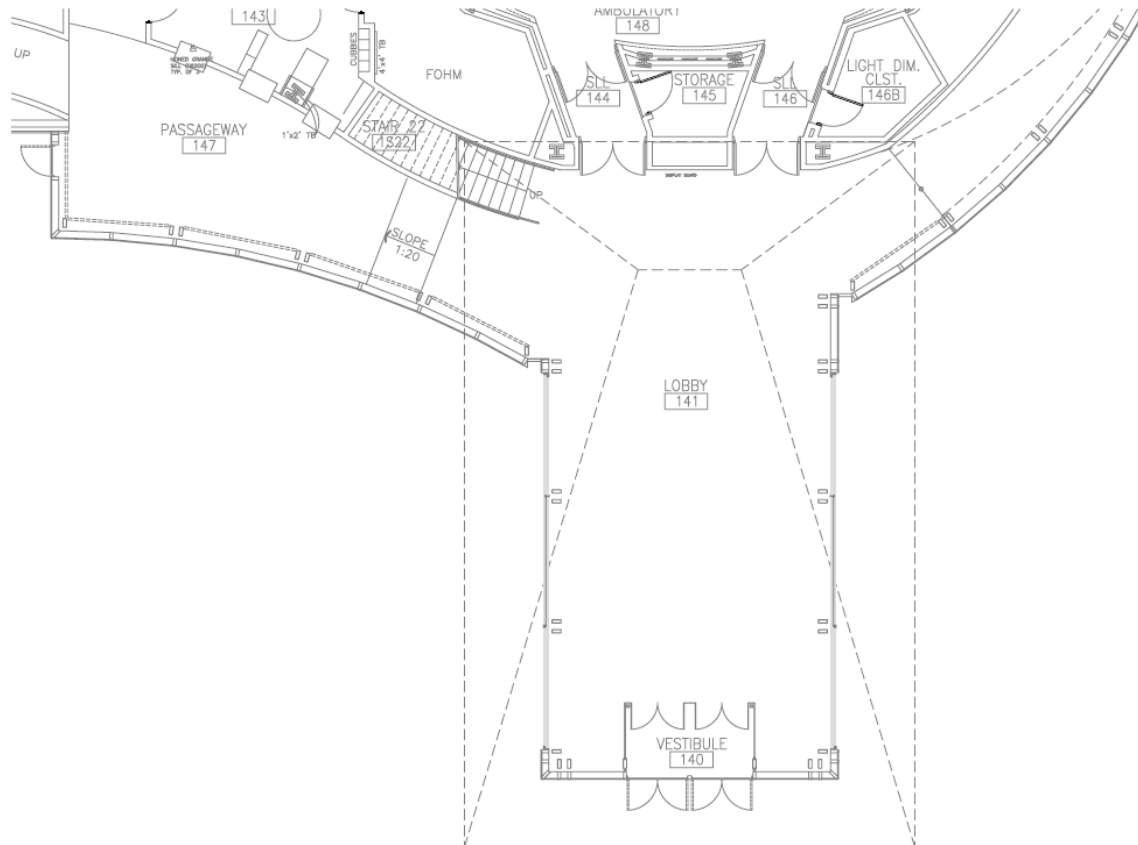


Figure 2.1 – Floorplan

Space Characteristics:

- Ceiling Height: 24' – 31' (pitched ceiling slopes up to exterior)
- Area: 1350 sq. ft. (lobby)
- Area: 680 sq. ft. (Adjoining Passageway)
- Materials: Aluminum, Glass, Wood Shutters, Slate Tile Flooring

Assumptions about the Space:

- 18 month cleaning cycle
- Very clean
- RCR: ~5
- Horizontal illuminance measured at floor level

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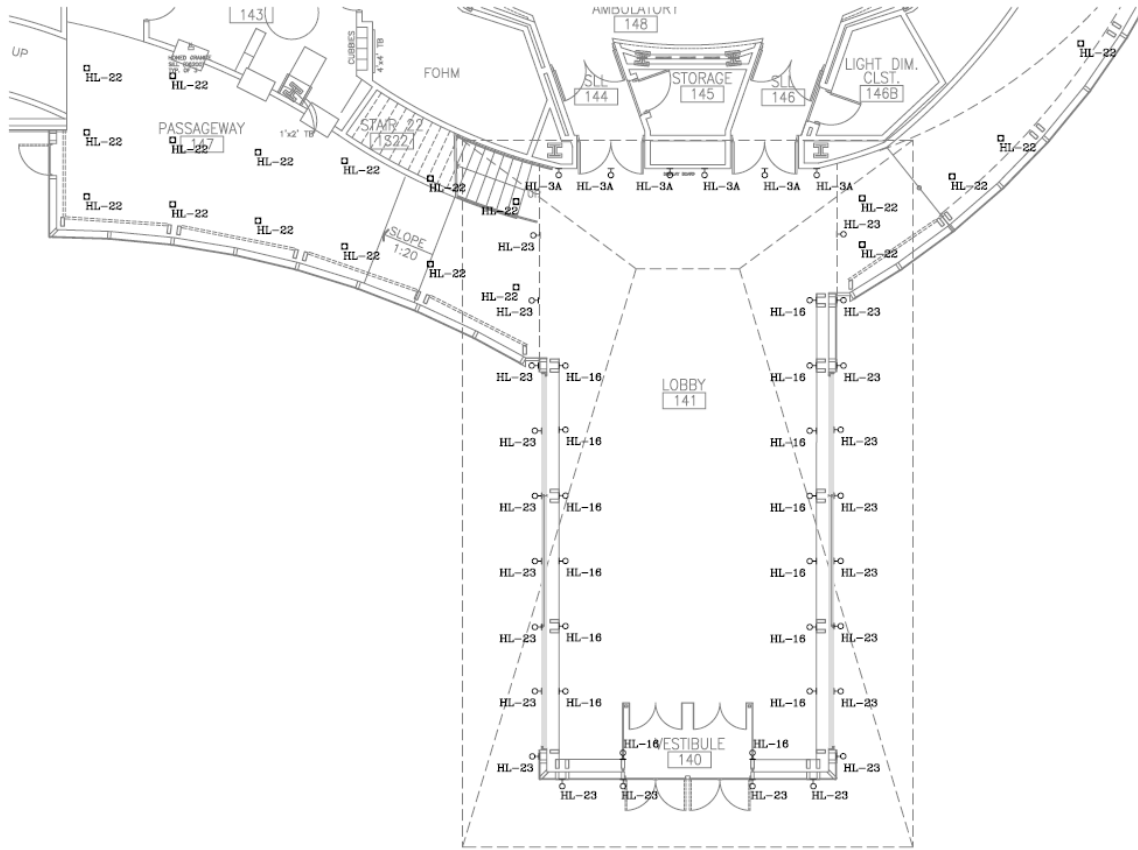


Figure 2.2 – Reflected Ceiling Plan

[add light loss factors and energy modeling summary here]

Existing Luminaire Cut Sheets

Cardinal CD27 & CD27P

one, two, or three T5 or T5HO lamps
or one or two T8 lamps

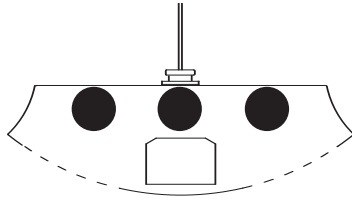
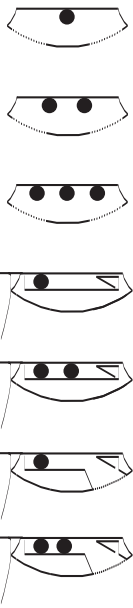
Fixture HL-11



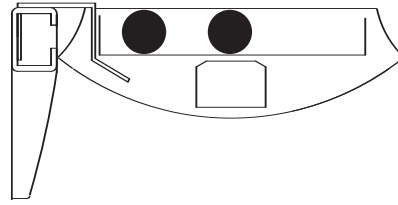
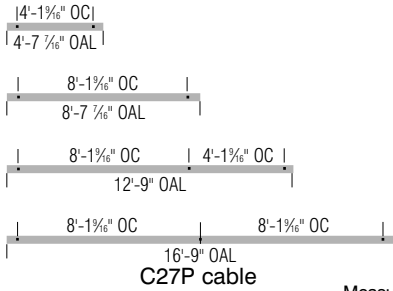
Linear Lighting

Cardinal CD27 & CD27P

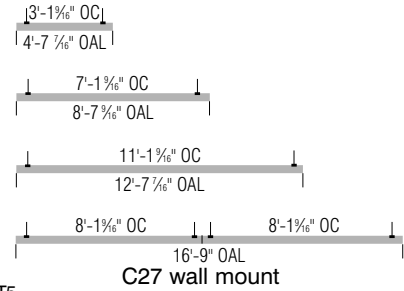
T5 options



Cable
2 3/8" H. x 7 1/2" W.



Wall mount
2 3/8" H. x 7 1/2" W.



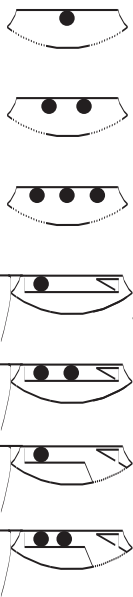
C27P cable

Measurements shown for T8 lamps. See website for T5.

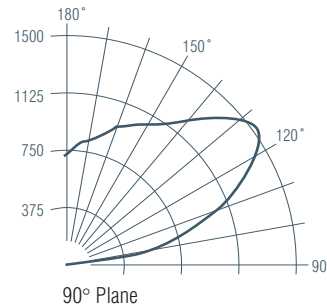
C27 wall mount

For design use only. Not for construction. See www.lineartg.com for engineering drawings specific to job.

T8 options



- Extruded aluminum housing with optional perforated panels
- 1, 2, or 3 ET5, ET5HO, or ET8 lamps
- Die-cast joiners
- Pre-wired with quick-connect plugs
- IBEW Local 3 and UL/CUL labels
- Weight per foot: 3.9 lbs. approx. (CD27)
Weight per foot: 3.5 lbs. approx. (CD27P)



CD27-I-2-ET5-NS

Efficiency: 85.7%

Max. candlepower at 125°: 1527

See www.lineartg.com for complete photometrics.

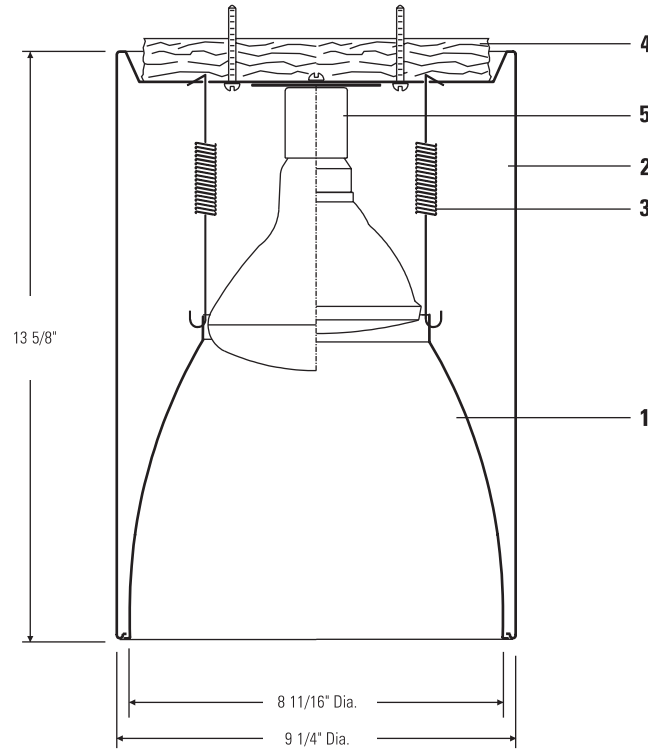
Catalog No.	Dir. Lamps Ballast Voltage	Shielding Mounting Color	Add'l options	Row length
Fixture	Lamps & Electrical Options	Mechanical & Aesthetic Options	Add'l	Feet
CD27P Perforated steel side, bidirectional	Direction B idirectional, Indirect Lamps 1, 2, or 3* Ballast ET5 Electronic T5 ET5HO High Output T5 ET8 Electronic T8 Voltage 120 or 277 347	Shielding NS No Shielding (CD27 only) PRD, PRT, STN, STK, HSL See tab for perf illustrations Mounting Sxx Stem Bxx Stem-Ball Cxx Cable WMT Wall mount <i>xx = inches, ceiling to top of fixture</i> Color BW Baked White AP Aluminum Paint CC Custom Color See color selector	NO No Option FU Fusing EC Emergency Circuits NL Night Light ED Electronic Dimming* EM Emergency Ballast** SC Separate Circuits DC Dust Cover ISB10 Instant Start Ballast <10%†† PSB10 Program Start Ballast <10%†† SF Special Feature Please define	Fixture length CD27P pendant 2', 3', 4', 5', 6', 7', 8' CD27 & CD27P wall mount 2', 3', 4', 5', 6', 7', 8', 9', 10', 11', 12'

* Dimming ballasts may not be available for all T5/T5HO lamp lengths. Consult factory.
** EM packs may not be available for all T5/T5HO lamp lengths. Consult factory.

† 3-light configuration available on pendant only.
†† ISB10 and PSB10 available with T8 only.



Calculite® Incandescent Surface Cylinder 7026A0



Fixture HL-17

Catalog Number	Lamp
7026A0	PAR38, 150W (cool beam)
Matte white housing with specular clear reflector	PAR38, 250W (T.H.)
	R40, 300W
	BR40, 300W

Features

- Reflector:** 16 ga. Specular clear Alzak® aluminum. 50° visual cut-off to lamp and lamp image.
- Housing:** One piece spun 16 ga. aluminum with returned bottom edge to seat reflector, no visible hardware. Matte white baked enamel finish.
- Retaining Springs:** Coil steel springs secure reflector to housing.
- Heat Insulator:** Fiberglass bulk insulation.
- Socket:** Medium base porcelain, nickel plated screw shell.

Options & Accessories

Stem Kit: 7249 Matte white

Permits surface units to be stem mounted. Supplied with 1/2" dia. and 5 1/2" dia. canopy. 37 5/8" O.A. Length. Stem can be cut to length at the job site. Self aligning swivel provides up to 41° vertical adjustment.

Other reflector and housing finishes consult factory.



Alzak® is a registered trademark of ALCOA.

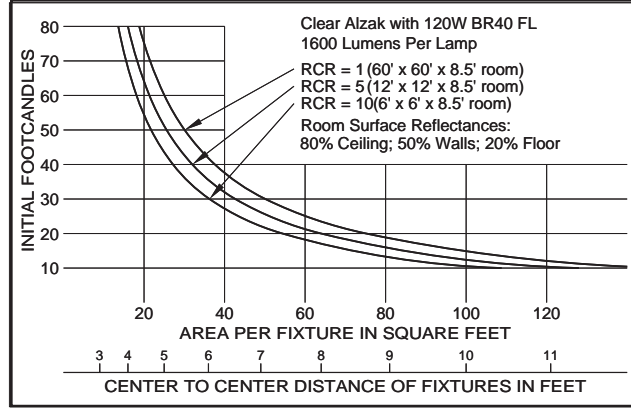
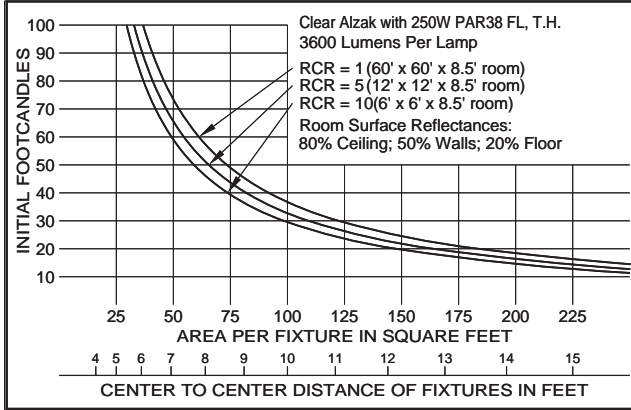
Electrical

Requires 75°C Supply wires. No.18 SF-1 leads to porcelain socket.

Labels

UL Listed for damp locations, I.B.E.W.

Job Information	Type:
Job Name:	
Cat. No.:	
Lamp(s):	
Notes:	

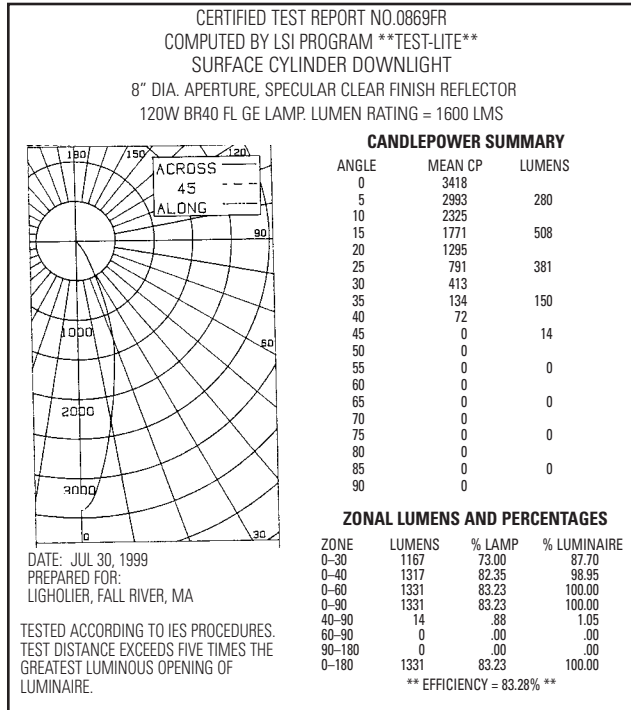
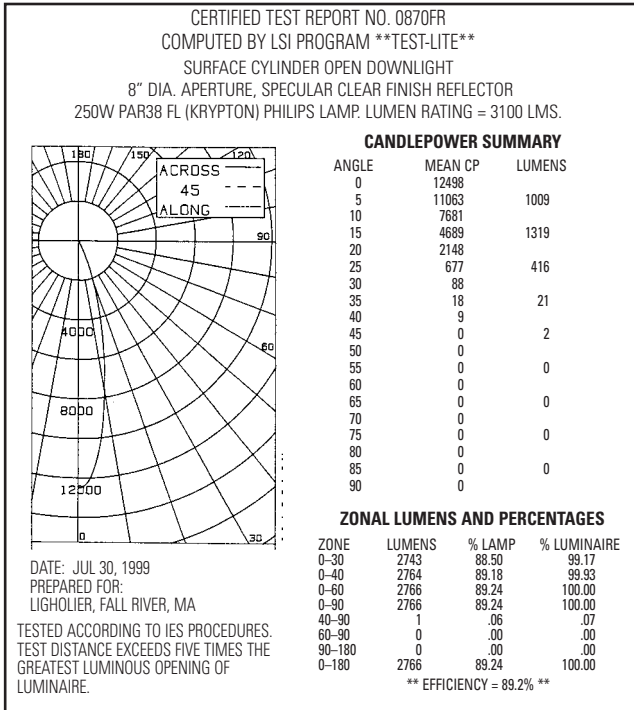


Use quick calculator chart to determine spacing of luminaires for desired level of illumination.
Conversion Factors:
100W PAR38 FL IR, F.C. X 0.6
120W PAR38 FL, F.C. X 0.5
90W PAR38 FL, F.C. X 0.4
75W & 65W IR PAR38 FL, F.C. X 0.3

Use quick calculator chart to determine spacing of luminaires for desired level of illumination.
Conversion Factors:
300W R40 FL, F.C. X 2.2
90W BR40 FL, F.C. X 0.7
75W BR40 FL, F.C. X 0.5

SPACING RATIO = 0.4

SPACING RATIO = 0.5



COEFFICIENTS OF UTILIZATION
%EFFECTIVE CEILING CAVITY REFLECTANCE

ROOM CAVITY RATIO	%EFFECTIVE CEILING CAVITY REFLECTANCE															
	% WALL REFLECTANCE															
	80	70	50	30	10	0	80	70	50	30	10	0				
1	1.02	1.01	.99	1.00	.99	.98	.96	.96	.95	.93	.93	.92	.90	.90	.89	.88
2	.98	.96	.94	.97	.92	.93	.94	.93	.91	.92	.91	.90	.89	.89	.88	.87
3	.95	.93	.91	.94	.92	.91	.93	.91	.89	.91	.89	.88	.89	.88	.87	.86
4	.93	.91	.89	.92	.90	.88	.91	.89	.87	.89	.87	.86	.88	.86	.85	.84
5	.91	.88	.86	.90	.87	.86	.89	.87	.85	.88	.86	.84	.86	.85	.84	.83
6	.89	.86	.85	.89	.86	.84	.88	.85	.84	.87	.85	.83	.86	.84	.83	.82
7	.87	.85	.83	.87	.84	.82	.86	.84	.82	.85	.83	.81	.84	.83	.81	.81
8	.86	.83	.81	.85	.83	.81	.84	.82	.81	.84	.82	.81	.84	.82	.80	.79
9	.84	.82	.80	.84	.81	.80	.83	.81	.79	.83	.80	.79	.82	.80	.79	.78
10	.82	.80	.78	.82	.80	.78	.82	.79	.78	.81	.79	.78	.81	.79	.77	.77

20% FLOOR CAVITY REFLECTANCE
Conversion Factor: 45W to 250W PAR38 FL, C.U. x 1.0

COEFFICIENTS OF UTILIZATION
%EFFECTIVE CEILING CAVITY REFLECTANCE

ROOM CAVITY RATIO	%EFFECTIVE CEILING CAVITY REFLECTANCE															
	% WALL REFLECTANCE															
	80	70	50	30	10	0	80	70	50	30	10	0				
1	.94	.93	.91	.93	.91	.90	.89	.88	.87	.86	.85	.85	.83	.83	.82	0
2	.90	.88	.86	.89	.87	.85	.86	.85	.83	.84	.83	.81	.82	.81	.80	.81
3	.87	.84	.82	.86	.83	.81	.84	.82	.80	.82	.80	.79	.80	.79	.78	.79
4	.84	.81	.78	.83	.80	.78	.81	.79	.77	.80	.76	.76	.78	.77	.75	.76
5	.80	.77	.75	.80	.77	.74	.78	.76	.74	.77	.75	.73	.76	.74	.73	.74
6	.78	.75	.72	.77	.74	.72	.76	.74	.72	.75	.73	.71	.74	.72	.71	.72
7	.75	.72	.69	.75	.72	.69	.74	.71	.69	.73	.70	.68	.72	.70	.68	.70
8	.73	.69	.67	.72	.69	.67	.71	.69	.67	.71	.68	.66	.70	.68	.66	.67
9	.70	.67	.64	.70	.67	.64	.69	.66	.64	.69	.66	.64	.68	.65	.64	.65
10	.68	.65	.62	.68	.65	.62	.67	.64	.62	.67	.64	.62	.66	.64	.62	.63

20% FLOOR CAVITY REFLECTANCE
Conversion Factor:
65W to 120W BR40FL, C.U. x 1.0; 300W R40FL, C.U. x .95

Job Information Type:

Lightolier a Genlyte Thomas Company www.lightolier.com
631 Airport Road, Fall River, MA 02720 • (508) 679-8131 • Fax (508) 674-4710
We reserve the right to change details of design, materials and finish.
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LIGHTOLIER®

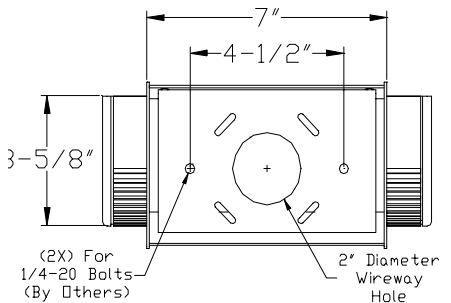
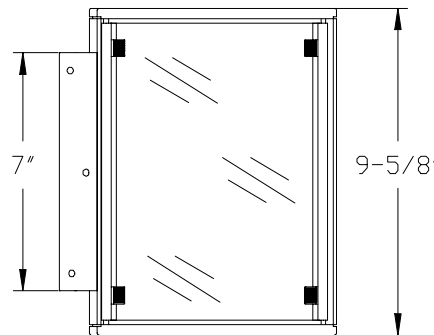
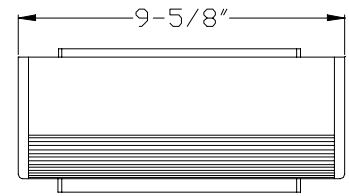
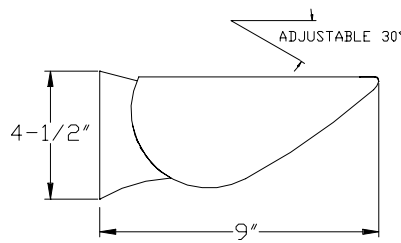
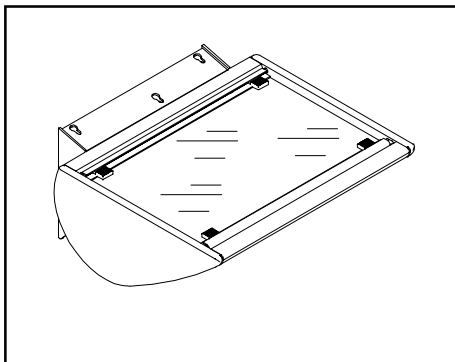
**INDOOR
ARCHITECTURAL
LUMINAIRES**

TIEMPO TM5

Fixture HL-16

**SURFACE MOUNT
REMOTE BALLAST**

**QUARTZ HALOGEN, CERAMIC METAL HALIDE
AND METAL HALIDE**



ORDERING

FIXTURE	MOUNTING	REFLECTOR	VOLTS	FINISH	OPTIONS
Quartz Halogen TM501 500W Max Mini-Can Ceramic Metal Halide TM517 35W/39W CMH (T6, G12 Base) TM522 70W CMH (T6, G12 Base) TM523 100W CMH (T6, G12 Base) TM527 150W CMH (T6, G12 Base) Metal Halide TM540 70W MH (E17, Med Base) TM541 100W MH (E17, Med Base) TM542 150/175W MH (E17, Med Base) (Specify Wattage)	RCB Surface Mount Remote Ballast	(1) Asymmetric Indirect (2) Asymmetric Wallwash	1=120V 2=277V 7=347V Quartz Halogen Available in 120V Only	W Semi-Gloss White BL Semi-Gloss Black BR Semi-Gloss Bronze N Semi-Gloss Natural S Semi-Gloss Satin G Semi-Gloss Graphite SF Specify Finish (See Color Chart) CC Custom Color (Contact Factory)	VS Solid Cutoff Visor VP Perforated Cutoff Visor GS External Louvered Visor AL Adjustable Shutter SS Adjustable Back Sawtooth Shield CF "Fade Not" Visored Color Lens CDF Dichroic Visored Color Lens UV UV Filter F HLR Fuseholder QEM Quartz Emergency Socket # QL Quartz Restrike—Hot/Cold Relay # CM-X Column Mount (X=Column Diameter)* # DC Bayonet Lamp, 50W Maximum. Available With TM517, TM522, TM523, TM527 Only. * Consult Factory For Minimum Column Dia.

ORDERING EXAMPLE: TM517 / WCB / (1) / 1 / W / GS

SPECIFICATIONS

Housing Extruded aluminum housing with die cast end plates secured to mounting bracket with a single fastener. Fastener is hidden inside of lamp housing allowing for no visible hardware.

Lens Clear prismatic tempered glass lens. Lens is secured to an anodized extruded aluminum frame. Lamp is maintained by a tool-less doorframe with die cast aluminum latches that hinge in either direction for ease of lamping and maintenance.

Reflector Die formed highly efficient unitized reflector systems constructed of 95% specular anodized peened aluminum. Reflector can be easily adjusted in field by hand rotating lamp housing to desired position while illuminated.

Wall Bracket: The wall bracket mounts to a standard 4-0 j-box (by others). Additional structural support is required (by others).

Electrical Quartz Halogen is available in 120V only. All Metal Halide ballasts are remote, high power factor, encased & potted, thermally protected, class 'B' sound rated, and supplied with j-box for thru wiring. Butterfly brackets supplied for T-bar ceiling mounting.

Labels Underwriters Laboratories and Canadian



FIXTURE	MOUNTING TYPE	REFLECTOR	VOLTS	FINISH	OPTIONS
TM5_____	RCB				

APPROVED: _____

JOB NAME: _____

TYPE: _____

I N S I G H T

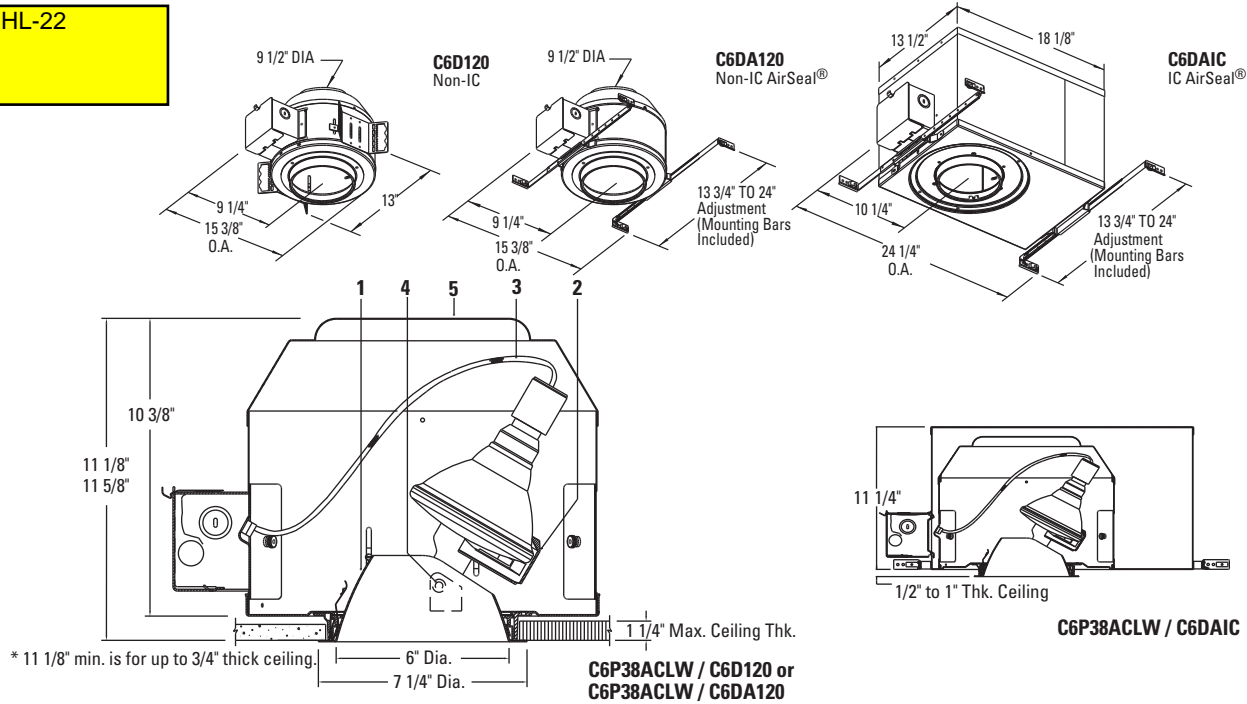


TEL: 505 345-0888 FAX: 505 345-3838
www.insightlighting.com



Calculite® Evolution Incandescent Adjustable Accent **C6P38A**

Fixture HL-22



Ceiling Cutout: 6 11/16" Dia.

Reflector Trim		Frame-In Kit		
C6P38A CLW	Specular Clear, White Flange	Non-IC	Non-IC AirSeal®	IC-AirSeal®
C6P38A CLP	Specular Clear, Polished Flange			
C6P38A CLW30	Specular Clear, White Flange (30° Cut)	C6D120	C6DA120	C6DAIC
C6P38A CLP30	Specular Clear, Polished Flange (30° Cut)	120W PAR38	120W PAR38	90W PAR38
C6P38A <input type="checkbox"/>	Add suffix. See options for other finishes			

Features

- Aperture Cone:** 16 ga. aluminum. Slot cut cone opening cone minimizes view into fixture. For maximum shielding order the 30° bias cut cone. Keyed to lampholder assembly for true aiming of lamp through aperture center and to prevent incorrect installation of cone. Available with painted white or polished flange. Interchangeable with other Evolution 6" line voltage trims.
- Lampholder Assembly:** Die-cast aluminum "U" shape lamp and accessory holder provided with tension springs for fast snap-in/snap-out side mounting of lamp and various accessories. 40° vertical tilt, 360° horizontal rotation; lockable. Can be relamped without disturbing aiming. Hot aiming can be done with the blade of screwdriver. Accepts up to two 4 3/4" dia. accessories. Can be relamped from above.
- Socket Harness:** Medium base porcelain socket with nickel plated screw shell, No. 18 SF-1 leads to keyed plug-in quick connector for power connection to junction box.
- Vertical / Horizontal Locking:** Single screw adjustment and locking system.
- Frame-In Kit:** Compatible frame-in kits are listed above. See separate frame-in kit specification sheets for details.
Non-IC and Non-IC AirSeal® - Insulation must be kept 3" away from fixture sides and wiring compartments and must not be placed above fixture in a manner which will entrap heat.
IC-AirSeal® - Fixture may be in direct contact with insulation.

Options & Accessories

Reflector Finishes¹

Clear: CL Gold: GD White: WH
 Black: BK Pewter: CPW
 Comfort Clear Diffuse: CCD
 Champagne Bronze: CCZ

¹Specify desired flange: **W** White, **P** Polished For 30° bias cut cone, add suffix "30".

Options & Accessories (cont.)

Evolution 6" Trims with Non-IC Frames

- C6P38A** 1 Primary Color Lens *or* 1 Secondary Color Lens *or*
 1 Mixing Color Lens *and* 1 Specialty Filter
- C6P38A30** 1 Primary Color Lens *or* 1 Secondary Color Lens *or*
 1 Mixing Color Lens *and* 1 Specialty Filter

Labels

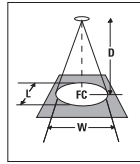
UL listed (suitable for damp locations), I.B.E.W.

US Patent No. 5,957,573. Other US and Foreign Patents Pending.

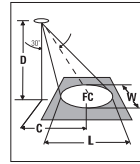
Job Information	Type:
Job Name:	
Cat. No.:	
Lamp(s):	
Notes:	

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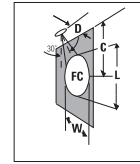
LIGHTOLIER®



0° Aiming Angle



30° Aiming Angle



30° Aiming Angle

PAR38 Halogen Line Voltage Lamps

Lamps	Beam Spread (To 50% CBCP)	CBCP	Rated Life (Hrs.)	D	FC	L	W	D	C	FC	L	W	D	C	FC	L	W
45W PAR38 NSP	8°	10000	2500	8'	156	1.3'	1.3'	7'	4.0'	133	1.5'	1.3'	3'	5.2'	139	1.9'	0.9'
				12'	69	1.9'	1.9'	10'	5.8'	65	2.1'	1.8'	4'	6.9'	78	2.6'	1.3'
				16'	39	2.5'	2.5'	13'	7.5'	38	2.7'	2.4'	5'	8.7'	50	3.2'	1.6'
				20'	25	3.1'	3.1'	16'	9.2'	25	3.4'	2.9'	6'	10.4'	35	3.8'	1.9'
45W PAR38 SP	12°	5500	2500	6'	153	1.3'	1.3'	5'	2.9'	143	1.4'	1.2'	2'	3.5'	172	1.7'	0.8'
				8'	86	1.7'	1.7'	7'	4.0'	73	2.0'	1.7'	3'	5.2'	76	2.6'	1.3'
				10'	55	2.1'	2.1'	9'	5.2'	44	2.5'	2.2'	4'	6.9'	43	3.5'	1.7'
				12'	38	2.5'	2.5'	11'	6.4'	30	3.1'	2.7'	5'	8.7'	28	4.3'	2.1'
45W PAR38 FL	30°	1700	2500	4'	106	2.1'	2.1'	3'	1.7'	123	2.2'	1.9'	1'	1.7'	213	2.7'	1.1'
				8'	27	4.3'	4.3'	5'	2.9'	44	3.7'	3.1'	2'	3.5'	53	5.5'	2.1'
				10'	17	5.4'	5.4'	7'	4.0'	23	5.1'	4.3'	3'	5.2'	24	8.2'	3.2'
				10'	17	5.4'	5.4'	9'	5.2'	14	6.6'	5.6'	4'	6.8'	13	10.9'	4.3'
50W PAR38 NSP (HIR)	9°	14000	3000	8'	219	1.3'	1.3'	7'	4.0'	186	1.5'	1.3'	3'	5.2'	194	1.9'	0.9'
				12'	97	1.9'	1.9'	10'	5.8'	91	2.1'	1.8'	4'	6.9'	109	2.6'	1.3'
				16'	55	2.5'	2.5'	13'	7.5'	54	2.7'	2.4'	5'	8.7'	70	3.2'	1.6'
				20'	35	3.1'	3.1'	16'	9.2'	36	3.4'	2.9'	6'	10.4'	49	3.8'	1.9'
50W PAR38 FL (HIR)	2.5°	3000	3000	6'	83	2.7'	2.7'	5'	2.9'	78	3.0'	2.6'	2'	3.5'	94	4.2'	1.8'
				8'	47	3.2'	3.2'	7'	4.0'	40	4.2'	3.6'	3'	5.2'	42	6.2'	2.7'
				10'	30	4.4'	4.4'	9'	5.2'	24	5.4'	4.6'	4'	6.9'	23	8.3'	3.5'
				12'	21	5.3'	5.3'	11'	6.4'	16	6.6'	5.6'	5'	8.7'	15	10.4'	4.4'
60W PAR38 SP	10°	17500	3000	8'	273	1.4'	1.4'	7'	4.0'	232	1.6'	1.4'	3'	5.2'	243	2.1'	1.0'
				12'	12	2.1'	2.1'	10'	5.8'	114	2.3'	2.0'	4'	6.9'	137	2.9'	1.4'
				16'	68	2.8'	2.8'	13'	7.5'	67	3.0'	2.6'	5'	8.7'	88	3.6'	1.7'
				20'	44	3.5'	3.5'	16'	9.2'	44	3.7'	3.2'	6'	10.4'	61	4.3'	2.1'
60W PAR38 FL	30°	3200	3000	6'	89	3.2'	3.2'	5'	2.9'	83	3.7'	3.1'	2'	3.5'	100	5.5'	2.1'
				8'	50	4.3'	4.3'	7'	4.0'	42	5.1'	4.3'	3'	5.2'	44	8.2'	3.2'
				10'	32	5.4'	5.4'	9'	5.2'	26	6.6'	5.6'	4'	6.9'	25	10.9'	4.3'
				12'	22	6.4'	6.4'	11'	6.4'	17	8.1'	6.8'	5'	8.7'	16	13.7'	5.4'
60W PAR38 WFL (HIR)	53°	1250	3000	3'	139	3.0'	3.0'	3'	1.7'	90	4.3'	3.5'	1'	1.7'	156	15.7'	2.0'
				5'	50	5.0'	5.0'	5'	2.9'	32	7.2'	5.6'	2'	3.5'	39	31.4'	4.0'
				7'	26	7.0'	7.0'	7'	4.0'	17	10.1'	8.1'	3'	5.2'	17	47.1'	6.0'
				9'	15	9.0'	9.0'	9'	5.2'	10	13.0'	10.4'	4'	6.9'	10	62.8'	8.0'
90W PAR38 NSP	9°	19500	2500	10'	195	1.6'	1.6'	8'	4.6'	198	1.7'	1.5'	4'	6.9'	152	2.6'	1.3'
				15'	87	2.4'	2.4'	12'	6.9'	88	2.5'	2.2'	6'	10.4'	60	3.8'	1.9'
				20'	49	2.4'	2.4'	16'	9.2'	49	3.4'	2.9'	8'	13.9'	38	5.1'	2.5'
				25'	31	3.9'	3.9'	20'	11.5'	32	4.2'	3.6'	10'	17.3'	24	6.4'	3.1'
90W PAR38 SP	12°	14500	2500	8'	227	1.7'	1.7'	7'	4.0'	192	2.0'	1.7'	3'	5.2'	201	2.6'	1.3'
				12'	101	2.5'	2.5'	10'	5.8'	94	2.8'	2.4'	4'	6.9'	113	3.5'	1.7'
				16'	57	3.4'	3.4'	13'	7.5'	56	3.7'	3.2'	5'	8.7'	73	4.3'	2.1'
				20'	36	4.2'	4.2'	16'	9.2'	37	4.5'	3.9'	6'	10.4'	50	5.2'	2.5'
90W PAR38 FL	28°	4500	2500	6'	125	3.0'	3.0'	5'	2.9'	117	3.4'	2.9'	2'	3.5'	141	4.9'	2.0'
				8'	70	4.0'	4.0'	7'	4.0'	60	4.8'	4.0'	3'	5.2'	63	7.4'	3.0'
				10'	45	5.0'	5.0'	9'	5.2'	36	6.1'	5.2'	4'	6.9'	35	9.8'	4.0'
				12'	31	6.0'	6.0'	11'	6.4'	24	7.5'	6.3'	5'	8.7'	23	12.3'	5.0'
90W PAR38 WFL	60°	1300	2500	3'	144	3.5'	3.5'	3'	1.7'	94	5.2'	4.0'	1'	1.7'	163	*	2.3'
				5'	52	5.6'	5.6'	5'	2.9'	34	6.7'	6.7'	2'	3.5'	41	*	4.6'
				7'	27	8.1'	8.1'	7'	4.0'	17	12.1'	9.3'	3'	5.2'	16	*	6.9'
				9'	16	10.4'	10.4'	9'	5.2'	10	15.6'	12.0'	4'	6.9'	10	*	9.2'
100W PAR38 SP (HIR)	10°	29000	2500	10'	290	1.7'	1.7'	8'	4.6'	294	1.9'	1.6'	4'	6.9'	227	2.9'	1.4'
				15'	129	2.6'	2.6'	12'	6.9'	131	2.8'	2.4'	6'	10.4'	101	4.3'	2.1'
				20'	73	3.5'	3.5'	16'	9.2'	74	3.7'	3.2'	8'	13.9'	57	5.7'	2.8'
				25'	46	4.4'	4.4'	20'	11.5'	47	4.7'	4.0'	10'	17.3'	36	7.2'	3.5'
100W PAR38 NFL (HIR)	27°	7500	3000	7'	153	3.4'	3.4'	6'	3.5'	135	3.9'	3.3'	2'	3.5'	234	4.6'	1.9'
				10'	75	4.8'	4.8'	9'	5.2'	60	5.9'	5.0'	3'	5.2'	104	7.0'	2.9'
				13'	44	6.2'	6.2'	12'	6.9'	34	7.8'	6.3'	4'	6.9'	59	9.3'	3.6'
				16'	29	7.7'	7.7'	15'	8.7'	22	9.8'	8.3'	5'	8.7'	38	11.6'	4.8'
100W PAR38 FL (HIR)	40°	3400	3000	6'	94	4.4'	4.4'	5'	2.9'	88	5.1'	4.2'	2'	3.5'	106	9.7'	2.9'
				8'	53	5.8'	5.8'	7'	4.0'	45	7.1'	5.9'	3'	5.2'	47	14.5'	4.4'
				10'	34	7.3'	7.3'	9'	5.2'	27	9.1'	7.8'	4'	6.9'	27	19.3'	5.8'
				12'	24	8.7'	8.7'	11'	6.4'	18	11.2'	9.2'	5'	8.7'	17	24.2'	7.3'
120W PAR38 NSP	10°	25000	3000	10'	250	1.7'	1.7'	8'	4.6'	254	1.9'	1.6'	4'	6.9'	195	2.9'	1.4'
				15'	111	2.6'	2.6'	12'	6.9'	113	2.8'	2.4'	6'	10.4'	87	4.3'	2.1'
				20'	63	3.5'	3.5'	16'	9.2'	63	3.7'	3.2'	8'	13.9'	49	5.7'	2.8'
				25'	40	4.4'	4.4'	20'	11.5'	41	4.7'	4.0'	10'	17.3'	31	7.2'	3.5'
120W PAR38 FL	30°	5000	3000	6'	139	3.2'	3.2'	5'	2.9'	130	3.7'	3.1'	2'	3.5'	156	5.5'	2.1'
				8'	78	4.3'	4.3'	7'	4.0'	66	5.1'	4.3'	3'	5.2'	69	6.2'	3.2'
				10'	50	5.4'	5.4'	9'	5.2'	40	6.6'	5.6'	4'	6.9'	39	10.9'	4.3'
				12'	35	6.4'	6.4'	11'	6.4'	27	8.1'	6.8'	5'	8.7'	25	13.7'	5.4'
120W PAR38 WFL	50°	2000	3000	4'	125	3.7'	3.7'	3'	1.7'	144	4.0'	3.2'	1'	1.7'	250	10.7'	1.9'
				6'	56	5.6'	5.6'	5'	2.9'	52	6.7'	5.4'	2'	3.5'	63	21.5'	3.7'
				8'	31	7.5'	7.5'	7'	4.0'	27	9.4'	7.5'	3'	5.2'	28	32.2'	5.6'
				10'	20	9.3'	9.3'	9'	5.2'	16	12.1'	9.7'	4'	6.9'	16	42.9'	7.5'

Accent Lighting Performance Data

(FC) is initial footcandles at center of beam. Beam length (L) and beam width (W) are where the candlepower is reduced to 50% of the center beam candlepower.

CBCP is center beam candlepower. (C) is distance to the center of the beam.

Lamp data shown is typical, and is based on bare lamp photometrics. Contact lamp manufacturers for availability and performance.

Job Information

Type:

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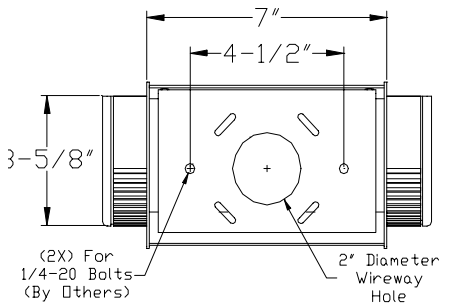
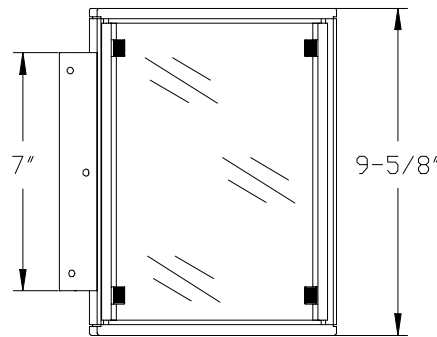
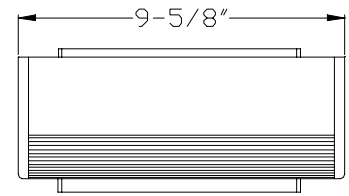
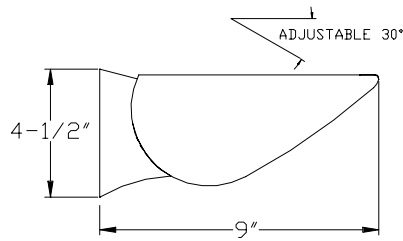
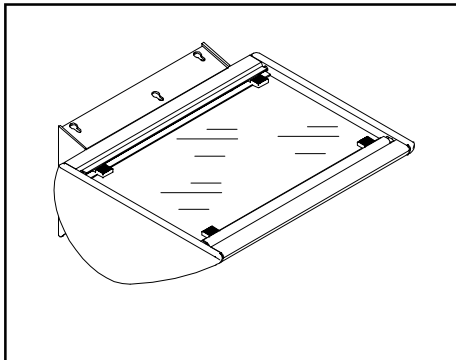
LIGHTOLIER®

INDOOR ARCHITECTURAL LUMINAIRES

TIEMPO TM5

SURFACE MOUNT REMOTE BALLAST

QUARTZ HALOGEN, CERAMIC METAL HALIDE AND METAL HALIDE



ORDERING

FIXTURE	MOUNTING	REFLECTOR	VOLTS	FINISH	OPTIONS
Quartz Halogen TM501 500W Max Mini-Can Ceramic Metal Halide TM517 35W/39W CMH (T6, G12 Base) TM522 70W CMH (T6, G12 Base) TM523 100W CMH (T6, G12 Base) TM527 150W CMH (T6, G12 Base) Metal Halide TM540 70W MH (E17, Med Base) TM541 100W MH (E17, Med Base) TM542 150/175W MH (E17, Med Base) (Specify Wattage)	RCB Surface Mount Remote Ballast	(1) Asymmetric Indirect (2) Asymmetric Wallwash	1=120V 2=277V 7=347V Quartz Halogen Available in 120V Only	W Semi-Gloss White BL Semi-Gloss Black BR Semi-Gloss Bronze N Semi-Gloss Natural S Semi-Gloss Satin G Semi-Gloss Graphite SF Specify Finish (See Color Chart) CC Custom Color (Contact Factory)	VS Solid Cutoff Visor VP Perforated Cutoff Visor GS External Louvered Visor AL Adjustable Shutter SS Adjustable Back Sawtooth Shield CF "Fade Not" Visored Color Lens CDF Dichroic Visored Color Lens UV UV Filter F HLR Fuseholder QEM Quartz Emergency Socket # QL Quartz Restrike—Hot/Cold Relay # CM-X Column Mount (X=Column Diameter)* # DC Bayonet Lamp, 50W Maximum. Available With TM517, TM522, TM523, TM527 Only. * Consult Factory For Minimum Column Dia.

ORDERING EXAMPLE: TM517 / WCB / (1) / 1 / W / GS

SPECIFICATIONS

Housing Extruded aluminum housing with die cast end plates secured to mounting bracket with a single fastener. Fastener is hidden inside of lamp housing allowing for no visible hardware.
Lens Clear prismatic tempered glass lens. Lens is secured to an anodized extruded aluminum frame. Lamp is maintained by a tool-less doorframe with die cast aluminum latches that hinge in either direction for ease of lamping and maintenance.
Reflector Die formed highly efficient unitized reflector systems constructed of 95% specular anodized peened aluminum. Reflector can be easily adjusted in field by hand rotating lamp housing to desired position while illuminated.

Wall Bracket: The wall bracket mounts to a standard 4-0 j-box (by others). Additional structural support is required (by others).
Electrical Quartz Halogen is available in 120V only. All Metal Halide ballasts are remote, high power factor, encased & potted, thermally protected, class 'B' sound rated, and supplied with j-box for thru wiring. Butterfly brackets supplied for T-bar ceiling mounting.
Labels Underwriters Laboratories and Canadian

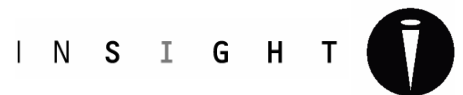


FIXTURE	MOUNTING TYPE	REFLECTOR	VOLTS	FINISH	OPTIONS
TM5_____	RCB				

APPROVED: _____

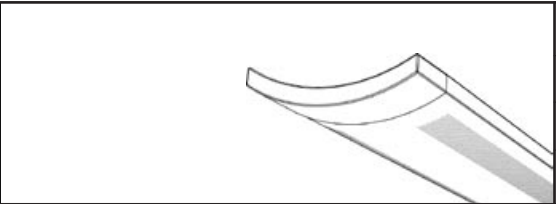
JOB NAME: _____

TYPE: _____



TEL: 505 345-0888 FAX: 505 345-3838
 www.insightlighting.com

New Luminaire Cut Sheets



Suspended
3 T5HO
Semi-indirect
8915H03

High performance optical system designed to accommodate T8 and T5HO lamps.

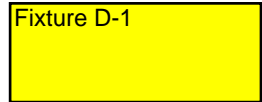
Available in a wide range of factory colors.

Two lighting distributions to choose from: Indirect or Semi-indirect

Factory pre-wired with quick-wire connectors for fast, easy installation.

Affordable pricing & fast delivery - standard orders can ship in 9 working days

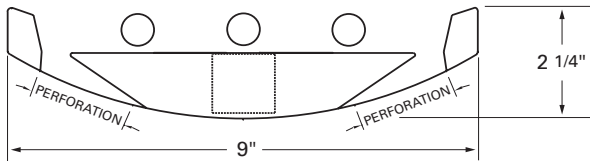
Suspended and wall mount options available



Order Number Guide

891 <i>Series</i> Cachet	5 <i>Type</i> Semi-indirect	H03 <i>Lamps</i> 3T5HO	L <i>Lower Optics</i> L - Semi-perf	N <i>Upper Optics</i> N - Standard	— — <i>Length</i> 04 - 4ft 08 - 8ft 12 - 12ft	— <i>Wiring Options</i> 1 - 1cct 2 - 2 cct 3 - 1cct w/ Emergency cct 4 - 2cct w/ Emergency cct 5 - 1cct w/ Battery Pack 6 - 2cct w/ Battery Pack 7 - 1cct w/ Dimming 8 - 1cct w/ Thru Wire 9 - 2cct w/ Thru Wire Consult factory for complete list of standard wiring	— <i>Voltage</i> 1 - 120V 2 - 277V 3 - 347V* * Consult factory for availability	E <i>Ballast</i> Electronic	— <i>Finish</i> W - Standard White C - Factory Color* X - Custom Color *See factory color chart
---------------------------------------	--	-------------------------------------	--	---	--	---	---	--	---

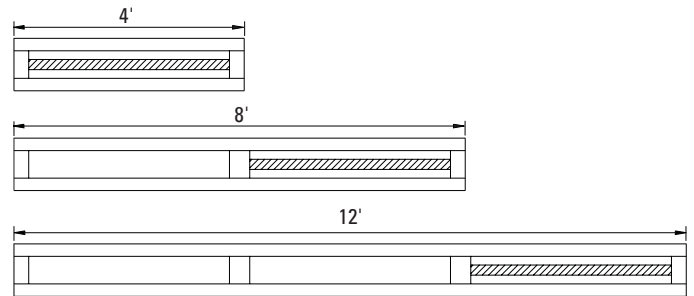
Cross Section



Weight 3.02 lb/ft

Modules

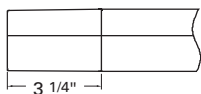
Linear runs are made by combining 4ft, 8ft and 12ft modules



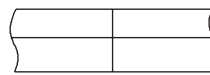
Indicates location of:
 - Optional emergency modules (controls all lamps) OR
 - Optional battery pack (standard controls one lamp only)

Indicates:
 - Module length / Mounting distance
 *Module length does not include endcaps

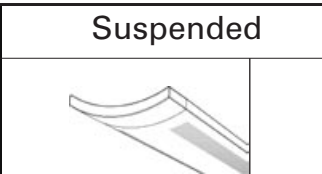
Ends / Joints



END-CAP
8913EANA_



INLINE JOINT
8913JNNN



Suspended
3T5HO

Semi-indirect

8915H03

Photometry

Specifications

Housing

Die-formed 20 gauge cold-rolled steel.

Ends

Molded reinforced high-impact polymer. Baked Powder coat finish.

Joints

Self-aligning joining system with hands-free pre-joining wire access.

Optical System

Constructed of highly specular aluminum, 96% reflective white steel, and perforated optical filter with acrylic overlay to produce a semi-indirect distribution.

Mounting

Aircraft cable gripper is tamper-resistant and provides infinite vertical adjustment capability. Aircraft cable, crimp and cable gripper independently tested to meet stringent safety requirements.

Electrical

All luminaires shall be factory pre-wired to section ends with quick-wire connectors.

Ballast

Electronic.

Approvals

Certified to UL & CSA standards.

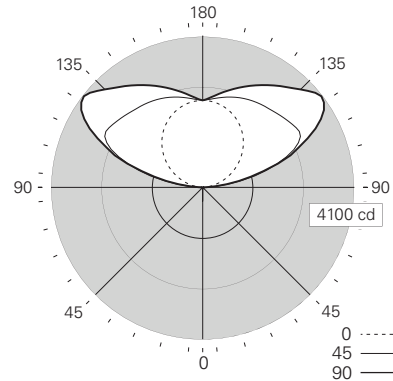
Finish

High-quality powder coat, factory applied to meet AAMA 2603-98. Available in Ledalite Standard White (textured matte finish), a selection of optional factory colors (see factory color chart), or custom colors. Consult factory for details.



Available with Response Integrated Controls
See www.ledalite.com for details

Due to continuing product improvements, Ledalite reserves the right to change specifications without notice.



Report# 2101446
Efficiency 93.0%
Peak Candela Value 4054 @ 127.5°
Peak: Zenith Ratio 1.7:1

AVERAGE LUMINANCE (cd/m ²)			
Vert. angle	Horizontal angle		
	0	45	90
55	99	206	227
65	125	260	251
75	220	315	299
85	655	889	842

CANDELA DISTRIBUTION						
Vert. Angle	Horizontal Angle					Zonal Lumens
	0	22.5	45	67.5	90	
0	21	21	21	21	21	
5	21	21	21	20	20	2
15	20	21	22	23	24	7
25	20	20	23	26	27	11
35	18	18	25	27	28	15
45	16	19	26	29	30	19
55	14	21	29	31	32	24
65	13	20	27	26	26	24
75	14	18	20	20	19	20
85	14	16	19	19	18	20
90	12	22	19	18	15	
95	113	331	429	338	352	409
105	438	1456	1795	1660	1709	1564
115	821	1712	2863	3085	3136	2365
125	1202	1871	2970	3819	4008	2502
135	1553	2038	2836	3515	3748	2141
145	1854	2199	2745	3212	3366	1691
155	2089	2307	2652	2940	3031	1212
165	2254	2355	2529	2675	2715	713
175	2342	2362	2394	2433	2442	235
180	2353	2353	2353	2353	2353	

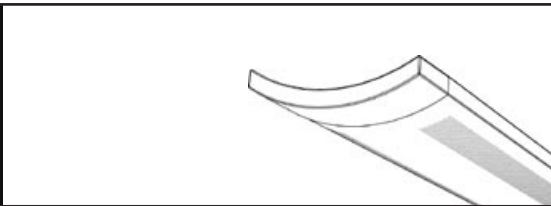
COEFFICIENTS OF UTILIZATION (%)													
Ceiling	80				70				50				0
	70	50	30	10	70	50	30	10	50	30	10	0	
0	88	88	88	88	76	76	76	76	52	52	52	0	
1	80	76	73	70	68	65	63	45	43	42	0		
2	73	67	61	57	62	57	53	39	37	34	0		
3	66	58	52	47	56	50	45	34	31	29	0		
4	60	51	45	39	51	44	38	30	27	24	0		
5	55	45	38	33	47	39	33	27	23	20	0		
6	51	40	33	28	43	35	29	24	20	17	0		
7	46	36	29	24	40	31	25	21	18	15	0		
8	43	32	26	21	36	28	22	19	16	13	0		
9	40	29	23	18	34	25	20	17	14	11	0		
10	37	26	20	16	31	23	18	16	12	10	0		

Based on a floor reflectance of 0.2

Note: The stated values for lamp lumens and luminaire efficiency consider the lamp/luminaire combination at conditions similar to that of most architectural spaces. Lamp manufacturers' data states that T-5 high output lamps produce a maximum output of 5000 lumens at 35° Celsius. Further, the IESNA's standards for photometric testing require an ambient temperature of 25° Celsius. At 25° Celsius, the bare T-5 high output lamp produces 93% of its maximum output, or 4650 lumens. When placed inside a luminaire, the T-5 high output lamp operates at a slightly higher ambient temperature than in free air. The increase in ambient temperature raises the lamp's output above 4650 lumens. This temperature effect causes the lamp/luminaire combination to produce more light output than the bare lamp alone. As a result, in very optically efficient luminaires, luminaire efficiencies over 100% are possible and correct. Ledalite feels that this method of photometric testing is the best representation of lamp and luminaire performance, adheres to current IESNA standards, and most closely represents how the lighting system will operate in the field.

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Semi-indirect
8915H03

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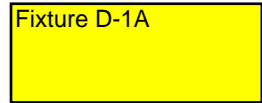
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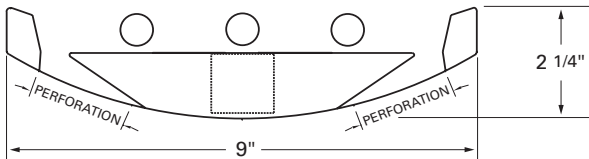
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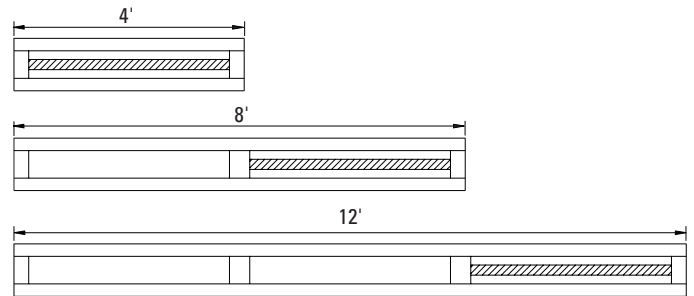
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Modules

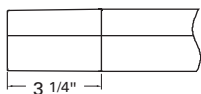
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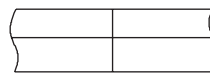
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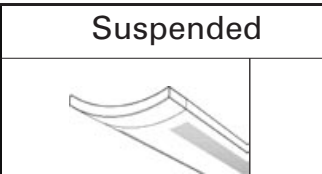
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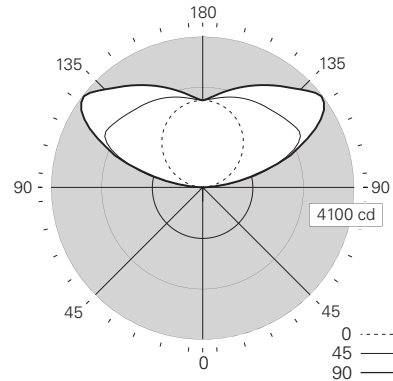
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SURFACE REAR MOUNTED PROJECTOR
High Output LED Source
1W / 24V

MINILINI™

IP 66 1W 24V



Projector body

- Suitable for wet locations, IP66 rated
- Compact low profile under 2" diameter
- Lengths available in 1', 2', 3' and 4'
- Consult factory for other lengths
- Grey powder coat (RAL#9006) Standard
- For additional colors consult factory
- 24V DC Remote constant voltage (R56) power supply
- UL Listed
- 10 Year Warranty anti-corrosion
- 3 Year Warranty on driver

Lamp / Optics

- Nominal LED spacing: 1" or 2" on center
- Light source: High power 1W Warm White LED
- Aluminum reflector - 10°, 25° & 50° refractive spot optics
- 50,000 hour lamp life @ 70% lumen output

Remote Power Supply

- 120-277V Primary 24VDC Secondary power supply (required) ordered separately
- 15' max length for remote power supply
- Consult factory for longer lengths
- Modules can be daisy chained together for Linear installations with 0 clearance between fixtures (Consult Factory)

Cover

- UV polycarbonate lens cover
- UV Stabilized (Non yellowing)

Mounting

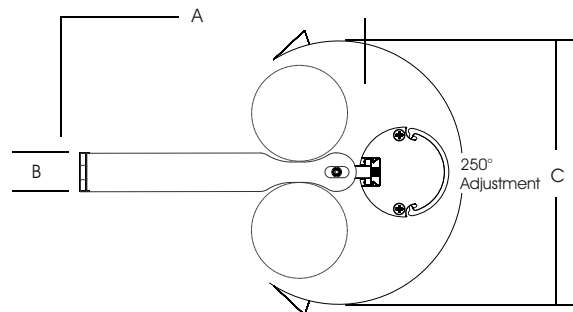
- Can be mounted end to end with zero clearance
- Mounted horizontal or vertical and can be rotated 220° on its axis

Features

- Available in 1', 2', 3' & 4' lengths
- Adjustable mounting brackets
- High light output LEDs (1.2W/LED)
- IP 66 rated
- Class 1 fixture continuous runs of 15' plus available (consult factory)

Applications

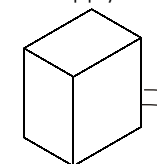
- Building facade lighting
- Wall washing
- Area Lighting
- Effects Lighting



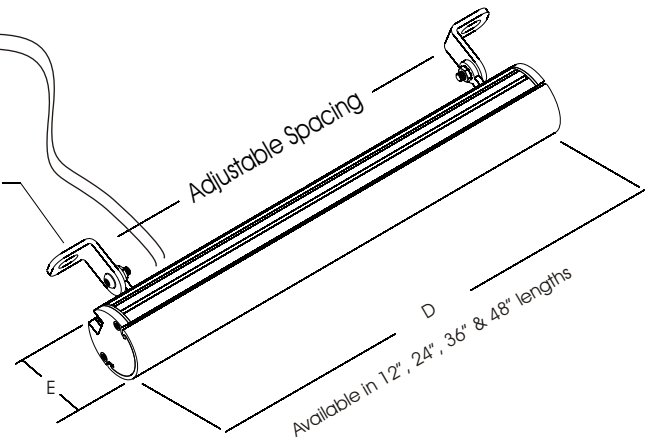
Dimensions

A Bracket Length Standard	B Bracket Width	C	D Fixture Length	E Fixture Diameter
1"	0.75"	4.5"	12.5"	1.75"
3"	0.75"	4.5"	24.5"	1.75"
5"	0.75"	4.5"	36.5"	1.75"
			48.5"	1.75"

Remote Power Supply



Use #8 Screws



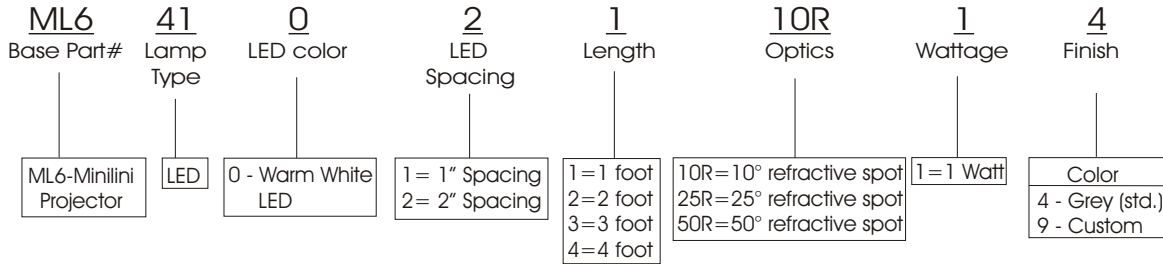
Available in 12", 24", 36" & 48" lengths



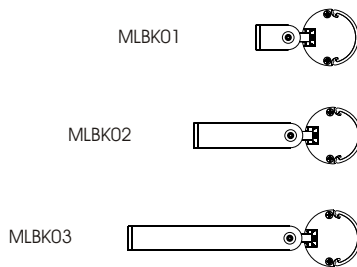
LED technology is changing rapidly, consult website for most current information

MINILINI

Part # Logic



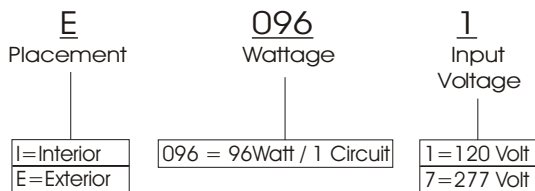
Required Choices for Mounting Fixture



MLBK01, MLBK02 or MLBK03 can be used with any of the three available fixture lengths.

Part No.	Extension from wall
MLBK01	1" mounting bracket length
MLBK02	3" mounting bracket length
MLBK03	5" mounting bracket length

LED driver



OTHER LED DRIVER OPTIONS

300W 3 (Circuits) X 100W - 36' with multiple feeds

* Consult Factory

LED Spacing	Fixture Length	Max # of Fixtures per 96W Driver
1" Spacing	1 foot	6
1" Spacing	2 foot	3
1" Spacing	3 foot	2
1" Spacing	4 foot	1
2" Spacing	1 foot	12
2" Spacing	2 foot	6
2" Spacing	3 foot	4
2" Spacing	4 foot	3

* Overall run length not to exceed 60'

Williams College '62 Center For Theater & Dance
Williamstown, MA

Appendix (Luminaire Schedules)

HLB LUMINAIRE SCHEDULE					
Fixture Type	Lamps		Manufacturer & Catalog No.	Voltage	Mounting
	No.	Type			
HL-1	1	100A/1F	LIGHTOLIER G7057CLW/G410	120	RECESSED
HL-2	1	100W A19	LIGHTOLIER C4AWCLW/C4120	120	RECESSED
HL-3	1	Q50MR16/C/NFL25	TRANSLITE SOROMA MICROSPOT L 211-AL	120	SURFACE
HL-3A	1	Q50MR16/C/NFL25	TRANSLITE SOROMA MICROSPOT L 211-AL	120	SURFACE
HL-4	-	5 WATT XENON	STARFIRE LIGHTING XF-3-5-72"-24v WITH XF-ASW REFLECTOR	120	SURFACE
HL-4A	-	5 WATT XENON	STARFIRE LIGHTING XF-3-5-84"-24v WITH XF-ASW REFLECTOR	120	SURFACE
HL-4B	-	5 WATT XENON	STARFIRE LIGHTING XF-3-5-96"-24v WITH XF-ASW REFLECTOR	120	SURFACE
HL-4C	-	5 WATT XENON	STARFIRE LIGHTING XF-3-5-120"-24v WITH XF-ASW REFLECTOR	120	SURFACE
HL-4D	-	5 WATT XENON	STARFIRE LIGHTING XF-3-5-144"-24v WITH XF-ASW REFLECTOR	120	SURFACE
HL-5	2	Q500PAR56MFL	KIRLIN SR31245-38-99-WB-MOD	120	WALL
HL-6	1	PLT-26W/830/4P/ALTO	LIGHTOLIER 8021 CCLW/6132BU	277	RECESSED
HL-7			Not Used		
HL-8	1	PLT-42W/830/4P/ALTO	LIGHTOLIER 8022 CCLW/7142BU	277	RECESSED
HL-9	1	50PAR20/H/SP10	STONCO 30KL	120	SURFACE
HL-10	1	Q350T3/CL/HIR	STONCO CPH515L	120	SURFACE
HL-11	3	F32T8/TL835	LINEAR LIGHTING CD27P-1-3-ET8-277-PRD-C-24-BW-ED-12	277	PENDANT
HL-11A	3	F32T8/TL835	LINEAR LIGHTING CD27P-1-3-ET8-277-PRD-C-24-BW-ED-8	277	PENDANT
HL-12	1	PLT-42W/830/4P/ALTO	DELRAY LIGHTING 2072SO-32-277-E	277	PENDANT
HL-13	-		Not Used		
HL-13A	-		Not Used		
HL-13B	1	F54T5/830/HO	LIGHTOLIER 8269WH	277	SUSPENDED
HL-14	3	90WPAR38/HAL/WFL/60/WLL	RSA COMBO - MODIFIED FOR WALL MOUNT	120	WALL
HL-15	1	90PAR38/H/FL25	LIGHTOLIER 8747WH/6196WH C-CLAMP MONOPOINT	120	SURFACE
HL-16	1	Q350T3/CL/HIR	INSIGHT LIGHTING TM501-RCB-1-1-CC-SS-MOD	120	WALL
HL-17	1	90PAR38/H/FL25	LIGHTOLIER 7026AD/7249	120	WALL
HL-18	2	Q500PAR56MFL	KIRLIN SR 31245-38-99-___	120	SURFACE
HL-19	-		Not Used		
HL-20	1	PLT-42W/830/4P/ALTO	LIGHTOLIER 8022WW CCLW/7142BU	277	RECESSED
HL-21	1	PLT-26W/830/4P/ALTO	LIGHTOLIER 8046 CCLW/61322BU	277	RECESSED
HL-22	1	90WPAR38/HAL/WFL/60/WLL	LIGHTOLIER C6P38A/C6D120	120	RECESSED
HL-23	1	CDM35/T6/U/830/G12	INSIGHT LIGHTING TM517-WCB-1-1-N-SS	120	WALL
HL-24	1	100A/1F	SPERO VX215-41-G	120	SURFACE
HL-25	1	22 WATT T5 R	WILA 202-70-SA-OR/10-120	120	SURFACE

THEATRE LUMINAIRE SCHEDULE					
Fixture Type	Lamps		Manufacturer & Catalog No.	Voltage	Mounting
	No.	Type			
BL	1	40W19/F	BEGA 2226P-MOD-INC		SURFACE
FL1	1	F32T8/TL835	COLUMBIA CS4-132-EB8-120-CSWG4	120	CEILING SURFACE
FL2	1	F32T8/TL835	COLUMBIA CS4-132-EB8-120-CSWG4	120	SUSPENDED
FL3	2	F32T8/TL835	COLUMBIA WC4-232-EB8-120	120	SURFACE
WL	1	1000T 3Q/P/CL	HUBBELL QL-1505		CATWALK RAIL

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ELECTRICAL ENGINEER LUMINAIRE SCHEDULE					
Fixture Type	Lamps		Manufacturer & Catalog No.	Voltage	Mounting
	No.	Type			
C1	1	500 T3Q/P/CL	STONCO CPH515		SURFACE
C2	1	50MR16/VWFL/60(FNV)	BK LIGHTING NS-9-BZP-9-11 TRANSFORMER CUS-1826-02-BZP TREE STRAP TS-TMC-BZP-6"		SURFACE
EC1	-	LED	DUAL LITE LESCS-G-(X/R/L/D/C)A		CEILING SURFACE
EC2	-	LED	DUAL LITE LESCS-G-(X/R/L/D/C)A		CEILING SURFACE
EC3	-	LED	DUAL LITE LESCS-G-(X/R/L/D/C)A		CEILING SURFACE
EC4	-	LED	DUAL LITE SEGWIN		CEILING SURFACE
EW1	-	LED	DUAL LITE LESCS-G-(X/R/L/D/C)A		WALL SURFACE
EW2	-	LED	DUAL LITE LESCS-G-(X/R/L/D/C)A		WALL SURFACE
EW3	-	LED	DUAL LITE SEGWIN		WALL SURFACE
EW4	2	FURNISHED WITH LAMP	DUAL LITE EZ-2		WALL
FC1	4	F32T8/TL835	COLUMBIA CSR8-232-EB8LH-277-CSWG4	277	CEILING SURFACE
FC1A	2	F32T8/TL835	COLUMBIA CSR4-232-EB8LH-277-CSWG4	277	CEILING SURFACE
FC1B	1	F17T8/TL835	COLUMBIA CH2-117-EB8LH-277	277	CEILING SURFACE
FC2	4	F32T8/TL835	COLUMBIA CS8-232-EB8LH-277-CSWG4	277	CEILING SURFACE
FC3	2	F32T8/TL835	COLUMBIA WC4-232-EB8-277	277	CEILING SURFACE
FC4	2	F32T8/TL835	COLUMBIA CS4-232-EB8LH-277-CSWG4	277	CEILING SURFACE
FC5	2	F32T8/TL835	COLUMBIA CS4-232-EB8-277-CSWG4	277	CEILING SURFACE
FC6	4	F32T8/TL835	COLUMBIA CS8-232-EB8LH-277	277	CEILING SURFACE
FC7	1	PLC-26W/38	CANLET BFCF26H1-GHC-277	277	CEILING
FC8	1	FC12T9/CWHL	LITHONIA 10991-277	277	CEILING SURFACE
FC9	2	F32T8/TL835	COLUMBIA STR24-232G-MPO-EB8LH-277	277	CEILING SURFACE
FR1	2	F32T8/TL835	COLUMBIA 4PS24-232G-FSA12.125-EB8LH-277	277	RECESSED
FR1A	2	FB32T8/TL835/6	COLUMBIA 4PS22-232U6G-FSA12.125-EB8LH-277	277	RECESSED
FR2	2	F32T8/TL835	COLUMBIA HC24-232G-LD29-S-EB8LH-277	277	RECESSED
FR2A	2	FB32T8/TL835/6	COLUMBIA HC22-232U6G-LD34-S-EB8LH-277	277	RECESSED
FR2B	3	FT40W/2G11/RS/35	COLUMBIA HC22-40TT-G-LD34-S-EB8LH-277	277	RECESSED
FR3	1	PLC-26W/35	PRESCOLITE CFT832-HEB-ST-F802H		RECESSED
FR4	2	F32T8/TL835	COLUMBIA STR24-232G-MPO-EB8LH-277	277	RECESSED
FR5	3	F32T8/TL835	COLUMBIA 4PS24-332G-FSA12.125-EB8LH-277	277	RECESSED
FR6	3	F32T8/TL835	COLUMBIA HC24-332G-LD39-S-EB8LH-277	277	RECESSED
FR7	2	F32T8/TL835	COLUMBIA HC24-232F-LD29-S-EB8LH-277	277	RECESSED
FR8	1	PLC-26W/35	PRESCOLITE CFT832-HEB-ST1P-B6-277	277	RECESSED
FS1	4	F32T8/TL835	COLUMBIA CSR8-232-EB8LH-277-CSWG4	277	SUSPENDED
FS1A	2	F32T8/TL835	COLUMBIA CSR4-232-EB8LH-277-CSWG4	277	SUSPENDED
FS2	2	F32T8/TL835	COLUMBIA CS4-232-EB8-277-CSWG4	277	SUSPENDED
FS3	4	F32T8/TL835	LINEAR LIGHTING CD27P-B-2-ET8-277-PRD-24-BW-8'	277	SUSPENDED
FS3A	2	F32T8/TL835	LINEAR LIGHTING CD27P-B-2-ET8-277-PRD-24-BW-4'	277	SUSPENDED
FS4	2	F32T8/TL835	COLUMBIA WC 4-232-EB8-277	277	SUSPENDED
FW1	4	F32T8/TL835	COLUMBIA F4-2DT8-WM-LD-EB8LH-277-8-SGL	277	WALL SURFACE
FW1A	2	F25T8/TL835	COLUMBIA F4-2DT8-WM-LD-EB8LH-277-MW-6-SGL	277	WALL SURFACE
FW1B	2	F32T8/TL835	COLUMBIA F4-2DT8-WM-LD-EB8LH-277-MW-4-SGL	277	WALL SURFACE
FW1C	1	F17T8/TL835	COLUMBIA F4-1DT8-WM-LD-EB8LH-277-MW-2-SGL	277	WALL SURFACE
FW2	4	F32T8/TL835	COLUMBIA WAL 8-232-EB8LH-277	277	WALL SURFACE
FW2A	2	F32T8/TL835	COLUMBIA WAL 4-232-EB8LH-277	277	WALL SURFACE
FW3	1	PLC-26W/35	CANLET BFWF26H1D-GHC-277	277	WALL SURFACE
FW4	2	F32T8/TL835	COLUMBIA CS4-232-EB8-277-CSWG4	277	WALL SURFACE
FW5	1	FC12T9/CWHL	LITHONIA 10991-277	277	WALL SURFACE
FW6	1	PLC-26W/35	CANLET BFWF26H1D-GHC-120	120	WALL SURFACE
FW7	1	PLS-13W/35	BEGA 2294P-277	277	WALL
MC1	1	MH175/U/M	SPAULDING PDI-M175PS-MT-Q2-SGB		CEILING SURFACE
MS1	1/1	MS320/PS/BU-ONLY 250Q/CL/MC	HUBBELL BL320 W8 HG16 WH-QST		SUSPENDED
MS2	1	CDM150/TD/830	HUBBELL BL150 W8 HG16 WH WG16		SUSPENDED

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ELECTRICAL ENGINEER LUMINAIRE SCHEDULE (cont.)					
Fixture Type	Lamps		Manufacturer & Catalog No.	Voltage	Mounting
	No.	Type			
MS2A	1/1	CDM150/TD/830 250G/CL/MC	HUBBELL BL150 W8 HG16 WH WG16-QST		SUSPENDED
P1	1	MH175/C/U/MED ED-17	SPRING CITY WILLIAM & MARY EFED-H-3-CO SPRING CITY HARRISBURG/BALTIMORE 10'-11 1/2" POST HT		POLE
R1	1	150PAR38/2FL	EDISON PRICE DL38/45/5AA		RECESSED
R2	1	150PAR38/2FL	EDISON PRICE DL38/6/COL		RECESSED
R3	1	20W MC	BEGA 2908-120V	120	RECESSED
R4	1	150PAR38FL	EDISON PRICE DL38/5 COL		RECESSED
S1	1	75WPAR30	LIGHTILIER 8202/8235WH-6190WH-120	120	SUSPENDED
S2	1	150PAR38FL	PRESCOLITE 1125-976		SUSPENDED
T1	-	75WPAR16	PRESCOLITE TV141 WH PRESCOLITE TS4-WH TRACK		TRACK
W1	1	60W G25	COLE LIGHTING VS-6"-WG		WALL SURFACE