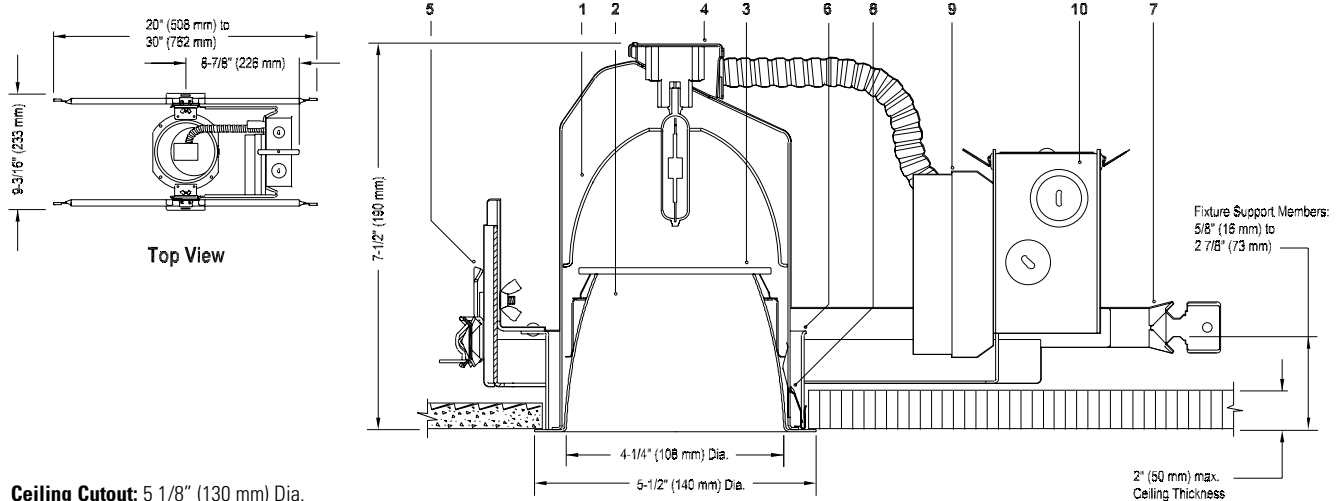




Ceiling Cutout: 5 1/8" (130 mm) Dia.

Reflector Trim			Frame-In Kit		Lamp (Ceramic Metal Halide)
C4T4VM	CLW	Specular Clear, White Painted Flange	C420BT5PGJ5E1	Electronic 120V	22W Philips MiniMasterColor
	CLP	Specular Clear, Matching Flange	C420T4GU65EU	Electronic 120V/277V	20W GE ConstantColor
	CCDW	Comfort Clear Diffuse, White Painted Flange	C420T4EU	Electronic 120V/277V	20W T4.5
	CCDP	Comfort Clear Diffuse, Matching Flange	C439T4GU65EU	Electronic 120V/277V	39W Philips MiniMasterColor
	CCZW	Champagne Bronze, White Painted Flange	C439T4E1	Electronic 120V	39W T4.5
	CCZP	Champagne Bronze, Matching Flange	C439T4E2	Electronic 277V	39W T4.5
			C470T4E1	Electronic 120V	70W T4.5
			C470T4E2	Electronic 277V	70W T4.5

Features

- Upper Reflector:** Clear anodized aluminum, 0.040" (16-ga.). Provides medium beam optics ideal for general lighting. Also available in medium and wide beam, see C4T4VN and C4T4VW specification sheets.
- Aperture Cone:** Provides 50° visual cut-off to lamp and lamp image; self-flange in painted white or aperture-matching polished flange. Consult factory for other finishes.
- Lamp Shield:** High-temperature glass as required by code, captive during re-lamping. Light diffusion provides exceptionally smooth beam.
- Socket Housing:** Galvanized steel, pre-wired with G8.5 pulse rated socket. Snaps onto upper reflector for secure attachment without tools; unitized construction assures proper lamp alignment to optics for consistent performance.
- Mounting Frame:** 0.048" (18-ga.) galvanized steel. Vertical adjustment mechanism accommodates mounting to virtually any ceiling system using mounting bars (provided, or 1/2" EMT tubing (by others). Single locking feature secures all adjustments. Alignment holes and markings allow fixture to be preset prior to installation.
- Mounting Ring:** 0.048" (18-ga.) galvanized steel. Designed for vertical adjustment from above or below for ceilings from 0" to 2" thick. Center-line notches allow consistent alignment of multiple fixtures.
- Mounting Bars:** 0.048" (18-ga.) pre-installed, telescoping bars extend to 30" long and lock securely into position. Built-in locking tabs provide positive attachment to common T-bar systems. Self-centering feature simplifies installation in 24" O.C. grid systems. Attaches to steel or wood joists without accessories.
- Trim Retention Springs:** Rust resistant springs secure reflector/housing for quick, tool-less installation.
- Ballast / Socket Housing / Cover Assembly:** Snaps onto junction box without tools for inspection and ballast replacement, accessible from below.
- Junction Box:** 0.048" (18-ga.) galvanized steel. UL listed for 8 No. 12 AWG, 90°C through branch circuit conductors. Allows inspection from below.
- Thermal Protector:** (Not Shown) Meets NEC and UL requirements. Do not install insulation above nor within 3" (76mm) of any part of the luminaire.

Electrical

Electronic Ballast: 120 or 277V, 50/60 Hz., enclosed, high power factor, T.H.D. <15%, thermally and transient protected, RMI/RFI complies with FCC Part 18 non-consumer limits, shut-down circuit at end of lamp life, sound rating "A", -5°F minimum starting temperature, Type 1 Outdoor rating.

Ballast	ANSI Code	Voltage	Max. Amps	Input Watts
20W MH	M156	120/277	0.21/0.10	23
39W MH	M130	120/277	0.39/0.17	44
70W MH	M139	120/277	0.67/0.29	78

Options and Accessories

Slope Ceiling Adapters: See Specification Sheet SCA.

Chicago Plenum: Consult Factory.

Labels

UL (Suitable for Damp Locations), CSA, I.B.E.W.

For 70W, install fixtures with minimum spacing between:

- Center-to center of adjacent luminaires: 2 feet.
- Top of luminaire to overhead building member: 1/2 inch.
- Luminaire center to side building member: 1 foot.

Job Information

Type:

Job Name:

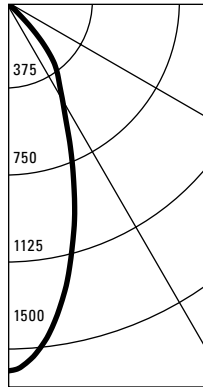
Cat. No.:

Lamp(s):

Notes:

20W T4 GE CMH Lamp, Lumen Rating = 1700 LMS, Aromat 20W Electronic Ballast CL Finish Trim

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	1595	
5	1524	143
10	1345	
15	1109	314
20	867	
25	649	308
30	493	
35	396	248
40	294	
45	125	107
50	10	
55	0	2
60	0	
65	0	0
70	0	
75	0	0
80	0	
85	0	0
90	0	

LUMINANCE SUMMARY CD. / SQ. M.		
ANGLE	MEAN CD/SQ M	
45	17255	
55	39	
65	0	
75	0	
85	0	

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	764	44.96	68.13
0-40	1012	59.56	90.25
0-60	1121	66	100
0-90	1121	66	100
40-90	109	6.43	9.75
60-90	0	0	0
90-180	0	0	0
0-180	1121	66	100

EFFICIENCY = 66.0%
SC = .7

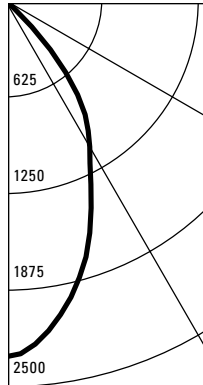
CERTIFIED TEST REPORT NO. 2322FR, DATE: OCT 04, 2003
COMPUTED BY LSI PROGRAM **TEST-LITE**

Coefficients of Utilization												
Ceiling	80%				70%		50%		30%			
Wall	70	50	30	10	50	10	50	10	50	10	50	10
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%											
0	.79	.79	.79	.79	.77	.77	.74	.74	.71	.71	.66	
1	.76	.74	.73	.72	.73	.71	.70	.68	.68	.66	.63	
2	.73	.70	.68	.66	.69	.65	.67	.64	.65	.63	.60	
3	.70	.66	.64	.61	.65	.61	.64	.60	.62	.59	.57	
4	.67	.63	.60	.58	.62	.57	.61	.57	.60	.56	.54	
5	.64	.60	.56	.54	.59	.54	.58	.53	.57	.53	.51	
6	.62	.57	.53	.51	.56	.51	.55	.50	.54	.50	.49	
7	.59	.53	.50	.48	.53	.47	.52	.47	.51	.47	.46	
8	.56	.51	.47	.45	.50	.45	.49	.44	.49	.44	.43	
9	.53	.48	.44	.42	.47	.42	.47	.42	.46	.42	.41	
10	.51	.45	.42	.39	.45	.39	.44	.39	.44	.39	.38	
LUMINAIRE INPUT WATTS = 23												

LUMINAIRE INPUT WATTS = 23

39W T4 Philips CMH Lamp, Lumen Rating = 3300 LMS, Aromat 39W Electronic Ballast, CL Finish Trim

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	2306	
5	2232	211
10	2084	
15	1856	523
20	1601	
25	1313	616
30	1095	
35	902	551
40	609	
45	243	216
50	20	
55	3	6
60	0	
65	0	0
70	0	
75	0	0
80	0	
85	0	0
90	0	

LUMINANCE SUMMARY CD. / SQ. M.		
ANGLE	MEAN CD/SQ M	
45	33651	
55	466	
65	0	
75	0	
85	0	

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1349	40.9	63.6
0-40	1900	57.59	89.56
0-60	2121	64.3	100
0-90	2121	64.3	100
40-90	221	6.72	10.44
60-90	0	0	0
90-180	0	0	0
0-180	2121	64.3	100

EFFICIENCY = 64.3%
SC = .8

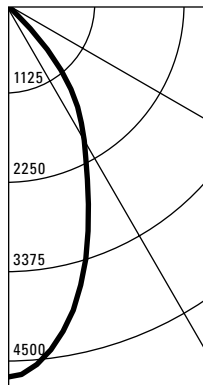
CERTIFIED TEST REPORT NO. 2321FR, DATE: OCT 01, 2003
COMPUTED BY LSI PROGRAM **TEST-LITE**

Coefficients of Utilization												
Ceiling	80%				70%		50%		30%			
Wall	70	50	30	10	50	10	50	10	50	10	50	10
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%											
0	.77	.77	.77	.77	.75	.75	.72	.72	.69	.69	.65	
1	.74	.72	.71	.70	.71	.68	.68	.66	.66	.64	.61	
2	.71	.68	.66	.64	.67	.63	.65	.62	.63	.60	.58	
3	.68	.64	.61	.59	.63	.59	.62	.58	.60	.57	.55	
4	.65	.60	.57	.55	.60	.54	.58	.54	.57	.53	.52	
5	.62	.57	.53	.51	.56	.51	.55	.50	.54	.50	.49	
6	.59	.54	.50	.48	.53	.48	.52	.47	.51	.47	.46	
7	.56	.51	.47	.45	.50	.44	.49	.44	.48	.44	.43	
8	.53	.47	.44	.42	.47	.41	.46	.41	.46	.41	.40	
9	.50	.45	.41	.39	.44	.39	.44	.38	.43	.38	.37	
10	.48	.42	.38	.36	.42	.36	.41	.36	.41	.36	.35	
LUMINAIRE INPUT WATTS = 44												

LUMINAIRE INPUT WATTS = 44

70W T4 Philips CMH Lamp, Lumen Rating = 6400 LMS, Aromat 70W Electronic Ballast, CL Finish Trim

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	4707	
5	4560	430
10	4188	
15	3667	1032
20	3046	
25	2445	1148
30	1987	
35	1587	982
40	1090	
45	444	390
50	38	
55	3	10
60	0	
65	0	0
70	0	
75	0	0
80	0	
85	0	0
90	0	

LUMINANCE SUMMARY CD. / SQ. M.		
ANGLE	MEAN CD/SQ M	
45	61418	
55	584	
65	0	
75	0	
85	0	

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	2610	40.79	65.39
0-40	3592	56.13	89.97
0-60	3992	62.38	100
0-90	3992	62.38	100
40-90	400	6.26	10.03
60-90	0	0	0
90-180	0	0	0
0-180	3992	62.38	100

EFFICIENCY = 62.4%
SC = .8

CERTIFIED TEST REPORT NO. 2320FR, DATE: OCT 01, 2003
COMPUTED BY LSI PROGRAM **TEST-LITE**

Coefficients of Utilization												
Ceiling	80%				70%			50%		30%		
Wall	70	50	30	10	50	10	50	10	50	10	50	10
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%											
0	.74	.74	.74	.74	.73	.73	.70	.70	.67	.67	.63	
1	.71	.70	.69	.67	.69	.66	.66	.64	.64	.62	.59	
2	.68	.66	.64	.62	.65	.61	.63	.60	.61	.59	.56	
3	.66	.62	.59	.57	.61	.57	.60	.56	.58	.55	.53	
4	.63	.59	.56	.54	.58	.53	.57	.53	.56	.52	.51	
5	.60	.56	.52	.50	.55	.50	.54	.49	.53	.49	.48	
6	.57	.53	.49	.47	.52	.47	.51	.46	.50	.46	.45	
7	.55	.49	.46	.44	.49	.44	.48	.43	.47	.43	.42	
8	.52	.47	.43	.41	.46	.41	.46	.41	.45	.40	.39	
9	.49	.44	.41	.38	.44	.38	.43	.38	.42	.38	.37	
10	.47	.41	.38	.36	.41	.36	.41	.36	.40	.35	.34	
LUMINAIRE INPUT WATTS = 78												

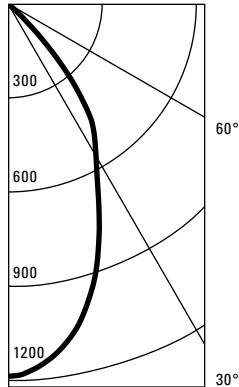
LUMINAIRE INPUT WATTS = 78

Job Information

Type:

22W PGJ5 Philips MiniMastercolor CMH Lamp, Lumen Rating = 1650 lms, Aromat Electronic Ballast, CL Finish Trim

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	1184	
5	1155	109
10	1089	
15	981	275
20	837	
25	679	319
30	558	
35	466	282
40	305	
45	112	104
50	9	
55	0	2
60	0	
65	0	0
70	0	
75	0	0
80	0	
85	0	0
90	0	

LUMINANCE SUMMARY CD. / SQ. M.

ANGLE	MEAN CD/SQ M
45	15448
55	30
65	0
75	0
85	0

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	703	43.28	64.45
0-40	985	60.63	90.28
0-60	1091	67.16	100
0-90	1091	67.16	100
40-90	106	6.53	9.72
60-90	0	0	0
90-180	0	0	0
0-180	1091	67.16	100

EFFICIENCY = 67.2%
SC = .8

CERTIFIED TEST REPORT NO. 3896FR

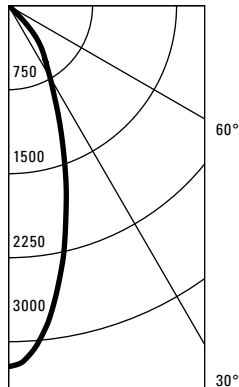
Coefficients of Utilization

Ceiling	80%				70%				50%				30%			
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%															
0	.80	.80	.80	.80	.78	.78	.75	.75	.71	.71	.67					
1	.77	.75	.74	.72	.74	.71	.71	.69	.68	.67	.64					
2	.74	.71	.69	.66	.70	.66	.67	.64	.66	.63	.61					
3	.70	.67	.64	.61	.66	.61	.64	.60	.63	.59	.57					
4	.67	.63	.60	.57	.62	.57	.61	.56	.60	.56	.54					
5	.64	.59	.56	.53	.59	.53	.58	.53	.57	.52	.51					
6	.62	.56	.53	.50	.56	.50	.55	.50	.54	.49	.48					
7	.58	.53	.49	.47	.53	.46	.52	.46	.51	.46	.45					
8	.56	.5	.46	.44	.49	.43	.49	.43	.48	.43	.42					
9	.53	.47	.43	.41	.46	.41	.46	.40	.45	.40	.39					
10	.50	.44	.40	.38	.44	.38	.43	.38	.43	.38	.37					

LUMINAIRE INPUT WATTS = 25

39W PGJ5 Philips MiniMastercolor CMH Lamp, Lumen Rating = 3000 lms, Aromat Electronic Ballast, CL Finish Trim

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	3222	
5	3023	282
10	2543	
15	1975	563
20	1453	
25	1032	493
30	742	
35	559	356
40	408	
45	178	152
50	20	
55	4	7
60	3	
65	2	2
70	1	
75	0	0
80	0	
85	0	0
90	0	

LUMINANCE SUMMARY CD. / SQ. M.

ANGLE	MEAN CD/SQ M
45	24647
55	605
65	404
75	65
85	0

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1337	44.59	72.13
0-40	1694	56.47	91.34
0-60	1852	61.75	99.89
0-90	1854	61.82	100
40-90	160	5.35	8.66
60-90	2	0.07	0.11
90-180	0	0	0
0-180	1854	61.82	100

EFFICIENCY = 61.8%
SC = .6

CERTIFIED TEST REPORT NO. 3910FR,

Coefficients of Utilization

Ceiling	80%				70%				50%				30%			
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%															
0	.74	.74	.74	.74	.72	.72	.69	.69	.66	.66	.62					
1	.71	.69	.68	.67	.68	.66	.66	.64	.63	.62	.59					
2	.68	.66	.64	.62	.65	.61	.63	.60	.61	.59	.57					
3	.65	.62	.60	.58	.61	.58	.60	.57	.59	.56	.54					
4	.63	.59	.57	.55	.59	.54	.57	.54	.56	.53	.52					
5	.61	.56	.53	.51	.56	.51	.55	.51	.54	.50	.49					
6	.58	.54	.51	.49	.53	.48	.52	.48	.52	.48	.47					
7	.56	.51	.48	.46	.51	.46	.50	.46	.49	.45	.44					
8	.54	.49	.46	.44	.48	.43	.48	.43	.47	.43	.42					
9	.51	.46	.43	.41	.46	.41	.45	.41	.45	.41	.40					
10	.49	.44	.41	.39	.44	.39	.43	.39	.43	.39	.38					

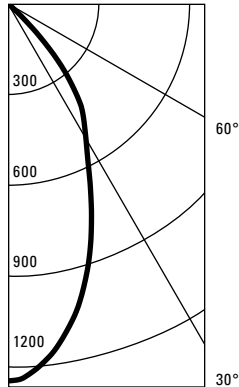
LUMINAIRE INPUT WATTS = 25

Job Information

Type:

20W GU6.5 GE ConstantColor CMH Lamp, Lumen Rating = 1615 lms, Aromat Electronic Ballast, CL Finish Trim

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	1243	
5	1199	113
10	1100	
15	964	271
20	800	
25	635	299
30	512	
35	423	258
40	287	
45	112	101
50	8	
55	0	2
60	0	
65	0	0
70	0	
75	0	0
80	0	
85	0	0
90	0	

LUMINANCE SUMMARY CD. / SQ. M.	
ANGLE	MEAN CD/SQ M
45	15493
55	0
65	0
75	0
85	0

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	683	42.31	65.45
0-40	941	58.3	90.19
0-60	1043	64.64	99.99
0-90	1043	64.64	100
40-90	102	6.34	9.81
60-90	0	0	0.01
90-180	0	0	0
0-180	1043	64.64	100

EFFICIENCY = 64.6%
SC = .8

CERTIFIED TEST REPORT NO. 3832FR

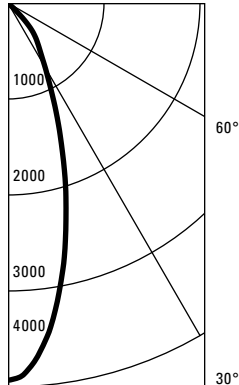
Coefficients of Utilization

Ceiling	80%				70%				50%				30%			
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%															
0	.77	.77	.77	.77	.75	.75	.72	.72	.69	.69	.65					
1	.74	.72	.71	.70	.71	.69	.68	.67	.66	.65	.62					
2	.71	.68	.66	.64	.67	.63	.65	.62	.63	.61	.59					
3	.68	.64	.62	.59	.63	.59	.62	.58	.60	.57	.55					
4	.65	.61	.58	.56	.60	.55	.59	.55	.58	.54	.52					
5	.62	.57	.54	.52	.57	.51	.56	.51	.55	.51	.49					
6	.59	.54	.51	.49	.54	.48	.53	.48	.52	.48	.47					
7	.57	.51	.48	.45	.51	.45	.50	.45	.49	.45	.44					
8	.54	.48	.45	.43	.48	.42	.47	.42	.47	.42	.41					
9	.51	.46	.42	.40	.45	.40	.45	.39	.44	.39	.38					
10	.49	.43	.39	.37	.43	.37	.42	.37	.42	.37	.36					

LUMINAIRE INPUT WATTS = 25

39W GU6.5 GE Constantcolor CMH Lamp, Lumen Rating = 3400 lms, Aromat Electronic Ballast, CL Finish Trim

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	3930	
5	3674	342
10	3063	
15	2333	665
20	1661	
25	1129	543
30	774	
35	564	364
40	418	
45	178	150
50	1	
55	0	0
60	0	
65	0	0
70	0	
75	0	0
80	0	
85	0	0
90	0	

LUMINANCE SUMMARY CD. / SQ. M.	
ANGLE	MEAN CD/SQ M
45	24675
55	0
65	0
75	0
85	0

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1550	45.61	75.09
0-40	1914	56.32	92.73
0-60	2064	60.73	100
0-90	2064	60.73	100
40-90	150	4.42	7.27
60-90	0	0	0
90-180	0	0	0
0-180	2064	60.73	100

EFFICIENCY = 60.7%
SC = .6

CERTIFIED TEST REPORT NO. 3915FR

Coefficients of Utilization

Ceiling	80%				70%				50%				30%			
Wall	70	50	30	10	50	10	50	10	50	10	50	10	50	10	50	10
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%															
0	.72	.72	.72	.72	.71	.71	.67	.67	.65	.65	.61					
1	.70	.68	.67	.66	.67	.65	.65	.63	.62	.61	.58					
2	.67	.65	.63	.61	.64	.61	.62	.59	.6	.58	.56					
3	.65	.62	.59	.57	.61	.57	.59	.56	.58	.55	.54					
4	.62	.59	.56	.54	.58	.54	.57	.53	.56	.53	.51					
5	.60	.56	.53	.51	.56	.51	.54	.51	.54	.50	.49					
6	.58	.54	.51	.49	.53	.49	.52	.48	.52	.48	.47					
7	.56	.51	.48	.46	.51	.46	.50	.46	.49	.46	.45					
8	.54	.49	.46	.44	.48	.44	.48	.44	.47	.43	.43					
9	.51	.47	.44	.42	.46	.42	.46	.41	.45	.41	.41					
10	.49	.44	.42	.40	.44	.40	.44	.40	.43	.39	.39					

LUMINAIRE INPUT WATTS = 45

Job Information

Type: