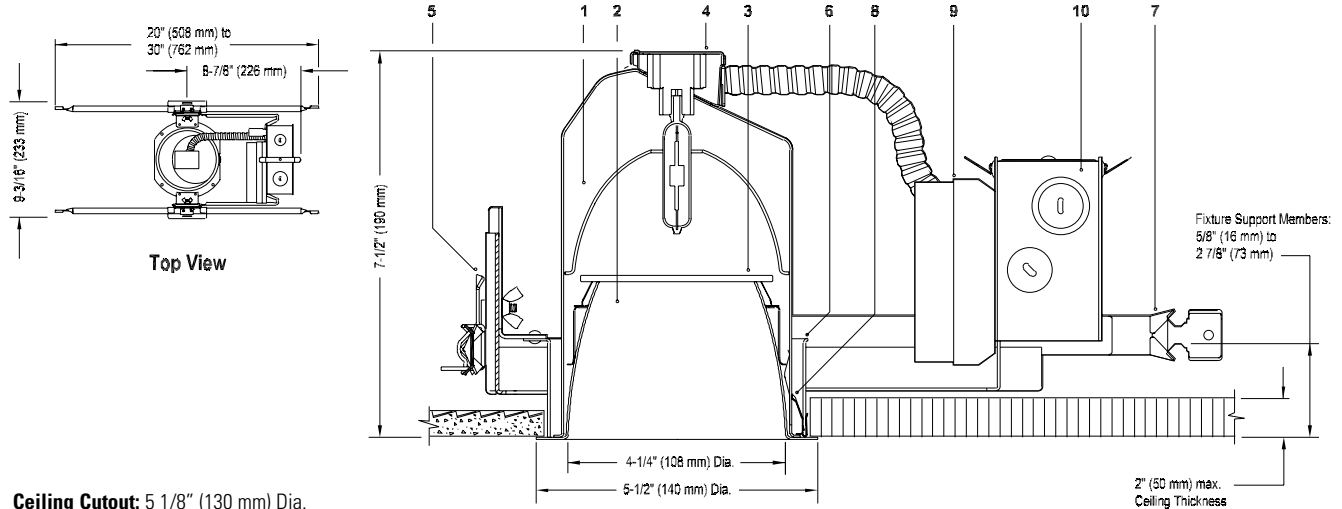




Ceiling Cutout: 5 1/8" (130 mm) Dia.

Reflector Trim			Frame-In Kit		Lamp (Ceramic Metal Halide)
C4T4VN	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 C4T4VM 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:

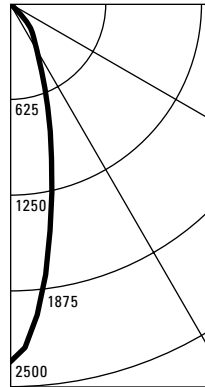
Cat. No.:

Lamp(s):

Notes:

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

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	2340	
5	2039	189
10	1505	
15	1047	306
20	720	
25	490	237
30	351	
35	270	173
40	209	
45	96	79
50	6	
55	0	1
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	13228
55	32
65	8
75	0
85	0

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	732	43.09	74.35
0-40	905	53.24	91.87
0-60	985	57.95	100.0
0-90	985	57.95	100.0
40-90	80	4.71	8.13
60-90	0	0.0	0.0
90-180	0	0.0	0.0
0-180	985	57.95	100.0

EFFICIENCY = 58.0%
2003SC = .4

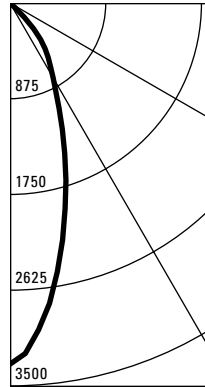
CERTIFIED TEST REPORT NO. 2401FR, DATE: DEC 22,
COMPUTED BY LSI PROGRAM **TEST-LITE**

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	.69	.69	.69	.69	.67	.67	.64	.64	.62	.62	.58	.58
1	.67	.65	.64	.63	.64	.62	.62	.60	.60	.58	.56	.56
2	.64	.62	.60	.59	.61	.58	.59	.57	.58	.55	.54	.54
3	.62	.59	.57	.55	.58	.55	.57	.54	.55	.53	.51	.51
4	.60	.56	.54	.52	.56	.52	.54	.51	.53	.50	.49	.49
5	.57	.54	.51	.49	.53	.49	.52	.48	.51	.48	.47	.47
6	.55	.51	.49	.47	.51	.47	.50	.46	.49	.46	.45	.45
7	.53	.49	.46	.44	.49	.44	.48	.44	.47	.44	.43	.43
8	.51	.47	.44	.42	.46	.42	.46	.42	.45	.42	.41	.41
9	.49	.45	.42	.40	.44	.40	.44	.40	.43	.40	.39	.39
10	.47	.43	.40	.38	.42	.38	.42	.38	.42	.38	.37	.37
LUMINAIRE INPUT WATTS = 23												

LUMINAIRE INPUT WATTS = 23

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

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	3301	
5	2998	281
10	2493	
15	1946	556
20	1462	
25	1061	506
30	788	
35	609	383
40	435	
45	185	158
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	25548
55	0
65	0
75	0
85	0

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1343	40.71	71.2
0-40	1726	52.33	91.52
0-60	1886	57.17	100
0-90	1886	57.17	100
40-90	159	4.85	8.48
60-90	0	0	0
90-180	0	0	0
0-180	1886	57.17	100

EFFICIENCY = 57.2%
SC = .6

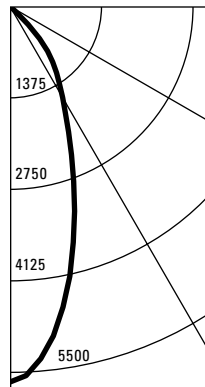
CERTIFIED TEST REPORT NO. 2400FR, DATE: DEC 22, 2003
COMPUTED BY LSI PROGRAM **TEST-LITE**

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	.68	.68	.68	.68	.67	.67	.64	.64	.61	.61	.57	.57
1	.66	.64	.63	.62	.63	.61	.61	.59	.59	.58	.55	.55
2	.63	.61	.59	.57	.60	.57	.58	.56	.57	.55	.53	.53
3	.61	.58	.56	.54	.57	.53	.56	.52	.54	.52	.50	.50
4	.58	.55	.52	.51	.54	.50	.53	.50	.52	.49	.48	.48
5	.56	.52	.49	.47	.52	.47	.51	.47	.50	.46	.45	.45
6	.54	.50	.47	.45	.49	.45	.49	.44	.48	.44	.43	.43
7	.52	.47	.44	.42	.47	.42	.46	.42	.45	.42	.41	.41
8	.50	.45	.42	.40	.44	.40	.44	.40	.43	.40	.39	.39
9	.47	.43	.40	.38	.42	.38	.42	.37	.41	.37	.37	.37
10	.45	.40	.38	.36	.40	.36	.40	.36	.39	.35	.35	.35
LUMINAIRE INPUT WATTS = 44												

LUMINAIRE INPUT WATTS = 44

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

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	5645	
5	5314	498
10	4588	
15	3673	1044
20	2797	
25	2083	989
30	1582	
35	1220	770
40	878	
45	386	322
50	14	
55	0	3
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	53412
55	0
65	0
75	0
85	0

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	2530	39.54	69.8
0-40	3299	51.56	91.02
0-60	3625	56.65	100
0-90	3625	56.65	100
40-90	325	5.09	8.98
60-90	0	0	0
90-180	0	0	0
0-180	3625	56.65	100

EFFICIENCY = 57.0%
SC = .6

CERTIFIED TEST REPORT NO. 2397FR, DATE: DEC 18, 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	0
RCR	Zonal Cavity Method - Effective Floor Cavity Reflectance = 20%												
0	.68	.68	.68	.68	.66	.66	.63	.63	.61	.61	.57		
1	.65	.64	.63	.62	.63	.61	.60	.59	.58	.57	.54		
2	.63	.60	.59	.57	.59	.56	.58	.55	.56	.54	.52		
3	.60	.57	.55	.53	.56	.53	.55	.52	.54	.51	.49		
4	.58	.54	.52	.50	.54	.49	.53	.49	.51	.48	.47		
5	.55	.51	.49	.47	.51	.46	.50	.46	.49	.46	.44		
6	.53	.49	.46	.44	.49	.44	.48	.44	.47	.43	.42		
7	.51	.46	.43	.42	.46	.41	.45	.41	.45	.41	.40		
8	.49	.44	.41	.39	.43	.39	.43	.39	.43	.39	.38		
9	.46	.42	.39	.37	.41	.37	.41	.36	.40	.36	.36		
10	.44	.39	.37	.35	.39	.35	.39	.34	.38	.34	.34		
LUMINAIRE INPUT WATTS = 78													

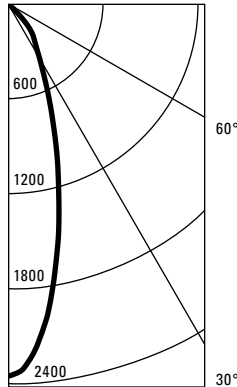
LUMINAIRE INPUT WATTS = 78

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	2350	
5	2154	200
10	1709	
15	1235	356
20	850	
25	572	277
30	396	
35	294	190
40	223	
45	96	82
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	13319
55	30
65	0
75	0
85	0

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	832	51.24	75.27
0-40	1022	62.91	92.41
0-60	1106	68.08	100
0-90	1106	68.08	100
40-90	83	5.17	7.59
60-90	0	0	0
90-180	0	0	0
0-180	1106	68.08	100

EFFICIENCY = 68.1%
SC = .5

CERTIFIED TEST REPORT NO. 3897FR

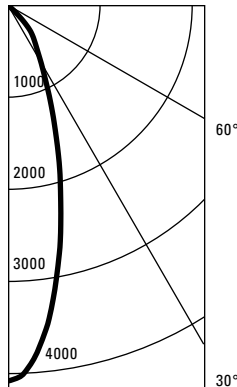
Coefficients of Utilization

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	.81	.81	.81	.81	.79	.79	.76	.76	.72	.72	.68					
1	.78	.77	.75	.74	.75	.73	.72	.71	.7	.69	.65					
2	.75	.73	.71	.69	.72	.68	.69	.67	.68	.65	.63					
3	.73	.69	.67	.65	.68	.64	.67	.63	.65	.62	.60					
4	.70	.66	.63	.61	.65	.61	.64	.6	.63	.59	.58					
5	.67	.63	.60	.58	.62	.57	.61	.57	.60	.56	.55					
6	.65	.60	.57	.55	.60	.55	.59	.54	.58	.54	.53					
7	.62	.58	.54	.52	.57	.52	.56	.52	.56	.51	.50					
8	.60	.55	.52	.50	.54	.49	.54	.49	.53	.49	.48					
9	.58	.53	.49	.47	.52	.47	.52	.47	.51	.47	.46					
10	.56	.50	.47	.45	.50	.45	.49	.45	.49	.45	.44					

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	4070	
5	3751	348
10	3014	
15	2206	635
20	1530	
25	1029	497
30	708	
35	517	335
40	388	
45	172	144
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	23785
55	0
65	0
75	0
85	0

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1479	49.33	75.5
0-40	1814	60.48	92.57
0-60	1960	65.34	100
0-90	1960	65.34	100
40-90	145	4.86	7.43
60-90	0	0	0
90-180	0	0	0
0-180	1960	65.34	100

EFFICIENCY = 65.3%
SC = .5

CERTIFIED TEST REPORT NO. 3909FR

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	.78	.78	.78	.78	.76	.76	.73	.73	.70	.70	.65					
1	.75	.74	.72	.71	.72	.70	.69	.68	.67	.66	.63					
2	.72	.70	.68	.66	.69	.65	.67	.64	.65	.63	.60					
3	.70	.66	.64	.62	.65	.62	.64	.61	.63	.60	.58					
4	.67	.63	.61	.59	.63	.58	.61	.58	.60	.57	.55					
5	.65	.61	.57	.55	.60	.55	.59	.55	.58	.54	.53					
6	.62	.58	.55	.53	.57	.53	.57	.52	.56	.52	.51					
7	.60	.55	.52	.50	.55	.50	.54	.50	.53	.49	.48					
8	.58	.53	.50	.48	.52	.47	.52	.47	.51	.47	.46					
9	.55	.50	.47	.45	.50	.45	.50	.45	.49	.45	.44					
10	.53	.48	.45	.43	.48	.43	.47	.43	.47	.43	.42					

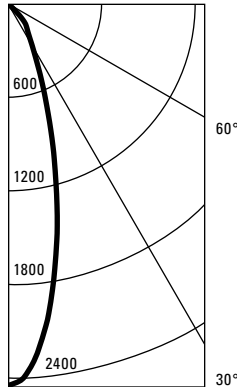
LUMINAIRE INPUT WATTS = 45

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	2445	
5	2227	206
10	1724	
15	1185	343
20	752	
25	469	231
30	306	
35	220	145
40	176	
45	85	68
50	6	
55	0	1
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	11799
55	0
65	0
75	0
85	0

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	780	48.3	78.42
0-40	924	57.27	92.99
0-60	994	61.59	99.99
0-90	994	61.59	100
40-90	69	4.32	7.01
60-90	0	0.01	0.01
90-180	0	0	0
0-180	994	61.59	100

EFFICIENCY = 61.6%
SC = .5

CERTIFIED TEST REPORT NO. 3831FR

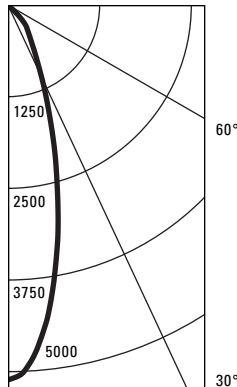
Coefficients of Utilization

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	.73	.73	.73	.73	.72	.72	.68	.68	.66	.66	.66	.66	.66	.66	.66	.66
1	.71	.69	.68	.67	.68	.66	.66	.64	.63	.62	.63	.61	.61	.59	.57	.57
2	.68	.66	.64	.63	.65	.62	.63	.61	.61	.59	.57	.57	.55	.53	.51	.51
3	.66	.63	.61	.59	.62	.59	.61	.58	.59	.57	.55	.55	.53	.51	.49	.49
4	.64	.60	.58	.56	.60	.56	.59	.55	.57	.54	.53	.53	.51	.49	.47	.47
5	.62	.58	.55	.53	.57	.53	.56	.52	.55	.52	.51	.51	.49	.47	.45	.45
6	.6	.56	.53	.51	.55	.51	.54	.50	.54	.50	.49	.49	.47	.45	.43	.43
7	.57	.53	.50	.49	.53	.48	.52	.48	.51	.48	.47	.47	.45	.43	.41	.41
8	.56	.51	.48	.46	.50	.46	.50	.46	.50	.46	.45	.45	.43	.41	.39	.39
9	.53	.49	.46	.44	.49	.44	.48	.44	.48	.44	.43	.43	.41	.39	.37	.37
10	.52	.47	.44	.42	.47	.42	.46	.42	.46	.42	.41	.41	.39	.37	.35	.35

LUMINAIRE INPUT WATTS = 25

39W GU6.5 GE ConstantColor CMH Lamp, Lumen Rating = 1615 LMS, Aromat Electronic Ballast, CL Finish Trim

CANDLEPOWER DISTRIBUTION



ANGLE	MEAN CP	LUMENS
0	5101	
5	4669	432
10	3681	
15	2592	748
20	1695	
25	1074	526
30	705	
35	501	328
40	384	
45	187	149
50	12	
55	0	3
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	25868
55	0
65	0
75	0
85	0

ZONAL LUMENS AND PERCENTAGES			
ZONE	LUMENS	% LAMP	% LUMINAIRE
0-30	1706	50.2	78.05
0-40	2035	59.86	93.06
0-60	2186	64.32	100
0-90	2186	64.32	100
40-90	151	4.46	6.94
60-90	0	0	0
90-180	0	0	0
0-180	2186	64.32	100

EFFICIENCY = 64.3%
SC = .5

CERTIFIED TEST REPORT NO. 3916FR

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	.71	.71	.68	.68	.68	.68	.68	.68	.68	.68
1	.74	.72	.71	.7	.71	.69	.69	.67	.66	.65	.66	.65	.65	.65	.65	.65
2	.71	.69	.67	.65	.68	.65	.66	.63	.64	.62	.64	.62	.62	.62	.62	.62
3	.69	.66	.63	.61	.65	.61	.63	.6	.62	.59	.62	.59	.59	.59	.59	.59
4	.67	.63	.6	.58	.62	.58	.61	.57	.6	.57	.6	.57	.57	.57	.57	.57
5	.64	.6	.57	.55	.6	.55	.58	.55	.58	.54	.58	.54	.54	.54	.54	.54
6	.62	.58	.55	.53	.57	.53	.56	.52	.56	.52	.56	.52	.52	.52	.52	.52
7	.6	.55	.52	.5	.55	.5	.54	.5	.53	.5	.53	.5	.53	.5	.53	.53
8	.58	.53	.5	.48	.52	.48	.52	.48	.51	.48	.51	.48	.51	.48	.51	.51
9	.56	.51	.48	.46	.5	.46	.5	.46	.5	.45	.5	.45	.5	.45	.45	.45
10	.54	.49	.46	.44	.49	.44	.48	.44	.48	.44	.48	.44	.48	.44	.48	.48

LUMINAIRE INPUT WATTS = 45

Job Information

Type: