

REPORT NUMBER: ITL90442-GONIOPHOTOMETRY

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ISSUE DATE: 05/07/18

PREPARED FOR: LUMOS LIGHTING

ADDRESS: 2385 S DELAWARE STREET
DENVER, CO 80223

CATALOG NUMBER: ALC-UP-DN-48-STR

LUMINAIRE: FABRICATED WHITE PAINTED METAL HOUSING, 2 WHITE CIRCUIT BOARDS EACH WITH 36 LEDS, CLEAR FLAT PLASTIC TOP LENS, TRANSLUCENT WHITE PLASTIC BOTTOM LENS. DRIVER IS EXPOSED AND OFFSET TO ONE SIDE OF THE OPTICAL COMPARTMENT.

LAMPS: SEVENTY-TWO WHITE LIGHT EMITTING DIODES (LEDS), AIMED AT THE HORIZON.

INPUT ELECTRICAL: 120.2 VOLTS, 25.1 WATTS, 0.209 AMPS

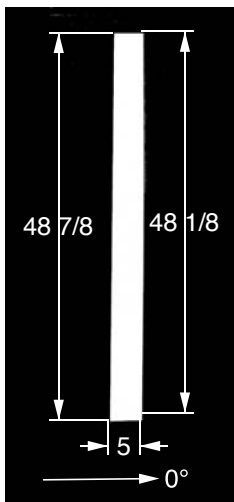
MOUNTING: WALL

LED DRIVER: AC ELECTRONICS AC-50CD1.4APC7, DRIVER HAS MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST. CLIENT STATES DRIVER PROGRAMMED FOR 1400mA OUTPUT.

NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE PROVIDED AT RATED INPUT VOLTAGE (120VAC, 60Hz) TO THE DRIVER.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 35.0 FEET



THIS REPORT WITH THE USE OF THE NVLAP LOGO SHALL NOT BE USED BY THE CLIENT TO CLAIM PRODUCT CERTIFICATION, APPROVAL, OR ENDORSEMENT BY NVLAP, NIST, OR ANY AGENCY OF THE FEDERAL GOVERNMENT.

Approved C STOUT

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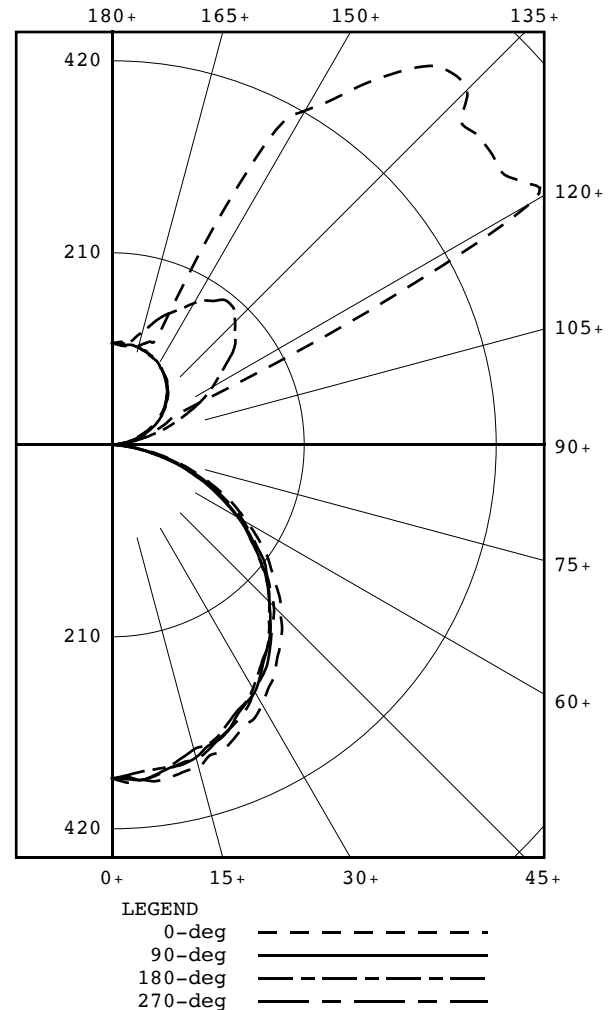
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	CANDELA DISTRIBUTION				FLUX
	0.0	90.0	180.0	270.0	
0	365	365	365	365	
5	368	368	359	368	35
15	365	354	345	356	100
25	340	325	322	330	152
35	309	289	287	295	185
45	260	243	243	250	192
55	205	187	190	193	174
65	141	126	130	133	131
75	74	63	67	70	72
85	16	9	13	13	17
90	6	0	4	0	
95	10	5	10	3	11
105	39	28	49	24	53
115	76	52	102	48	153
125	520	71	151	69	214
135	549	86	190	85	187
145	482	97	192	97	133
155	261	105	161	106	66
165	112	110	128	111	32
175	109	110	113	112	11
180	111	111	111	111	

ZONAL ZONE	LUMEN LUMENS	SUMMARY %FIXT
0- 30	287	15.0
0- 40	472	24.6
0- 60	838	43.7
0- 90	1058	55.2
90-120	217	11.3
90-130	431	22.5
90-150	751	39.1
90-180	860	44.8
0-180	1919	100.0

EFFICACY = 76.5 lm/W
 CIE TYPE - GENERAL DIFFUSE
 PLANE : 0-DEG 90-DEG 180-DEG
 SPACING CRITERIA : 1.32 1.26 1.25
 BEAM ANGLE (50%) : 37.6 X 77.4 DEGREES
 FIELD ANGLE (10%) : 144.4 X 153.4 DEGREES





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PHONE: (303) 442-1255 • FAX: (970) 535-3114 • E-MAIL: itl@itlboulder.com • WEBSITE: www.itlboulder.com

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PLANE	:	0-DEG	90-DEG
LUMINOUS LENGTH	:	5.000	48.125
HEIGHT OF SIDE	:	0.125	0.125

LUMINANCE DATA IN CANDELA/SQ M			
ANGLE	AVERAGE	AVERAGE	AVERAGE
IN DEG	0-DEG	90-DEG	180-DEG
45	2311.	2208.	2160.
55	2223.	2092.	2060.
65	2040.	1910.	1881.
75	1685.	1553.	1525.
85	920.	646.	747.



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CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0	112.5	135.0	157.5	180.0	202.5	225.0
0.0	365	365	365	365	365	365	365	365	365	365	365
5.0	368	372	363	360	368	367	358	362	359	366	362
10.0	369	365	363	361	359	357	356	357	357	357	358
15.0	365	364	356	351	354	350	344	347	345	352	349
20.0	356	354	351	344	343	335	338	340	339	338	341
25.0	340	344	336	330	325	324	323	322	322	327	325
30.0	328	327	324	313	312	303	308	308	308	307	312
35.0	309	310	302	296	289	287	287	286	287	291	290
40.0	286	285	283	272	269	263	267	267	267	267	271
45.0	260	262	255	250	243	242	242	241	243	245	245
50.0	232	231	230	221	218	213	217	217	217	217	221
55.0	205	203	200	194	187	187	188	188	190	191	191
60.0	172	171	167	162	159	156	158	158	160	160	164
65.0	141	138	136	132	126	126	126	128	130	131	131
70.0	106	105	101	97	94	94	96	96	97	99	101
75.0	74	72	69	66	63	63	64	66	67	68	68
80.0	42	40	37	35	33	33	34	36	36	38	39
85.0	16	15	13	11	9	10	11	13	13	14	14
90.0	6	5	4	2	0	1	3	3	4	3	3
95.0	10	10	9	7	5	8	8	9	10	10	9
100.0	22	22	21	20	15	22	25	25	26	25	25
105.0	39	38	37	122	28	42	47	47	49	49	49
110.0	57	56	101	177	41	64	72	73	75	75	73
115.0	76	112	348	241	52	84	97	98	102	101	99
120.0	528	487	386	248	62	93	124	125	127	127	124
125.0	520	501	403	246	71	102	144	151	151	152	147
130.0	524	489	448	210	79	105	159	173	176	175	162
135.0	549	544	427	95	86	108	161	186	190	188	166
140.0	541	505	381	97	93	108	155	193	201	197	162
145.0	482	453	338	98	97	109	150	182	192	183	153
150.0	422	390	118	100	102	107	141	168	179	172	146
155.0	261	127	113	100	105	109	133	155	161	155	135
160.0	120	116	109	105	109	111	122	139	146	142	126
165.0	112	108	105	107	110	113	115	125	128	125	115
170.0	106	106	108	110	111	113	115	115	115	115	114
175.0	109	107	108	110	110	112	112	114	113	113	112
180.0	111	111	111	111	111	111	111	111	111	111	111



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CANDELA DISTRIBUTION
LATERAL ANGLE

	247.5	270.0	292.5	315.0	337.5	360.0
0.0	365	365	365	365	365	365
5.0	364	368	368	365	370	368
10.0	361	360	361	363	365	369
15.0	348	356	356	359	364	365
20.0	340	342	343	350	352	356
25.0	325	330	333	340	344	340
30.0	310	311	315	323	325	328
35.0	289	295	296	306	310	309
40.0	270	271	276	282	285	286
45.0	244	250	251	260	261	260
50.0	221	221	226	231	233	232
55.0	191	193	196	203	203	205
60.0	164	165	167	170	173	172
65.0	132	133	137	139	139	141
70.0	100	101	103	105	107	106
75.0	69	70	72	73	74	74
80.0	38	38	40	42	42	42
85.0	13	13	14	16	16	16
90.0	1	0	2	4	5	6
95.0	8	3	7	9	10	10
100.0	24	12	19	21	22	22
105.0	45	24	101	38	38	39
110.0	68	36	155	166	56	57
115.0	89	48	196	329	192	76
120.0	102	59	199	355	492	528
125.0	108	69	206	415	472	520
130.0	113	77	92	417	488	524
135.0	114	85	90	394	530	549
140.0	115	91	93	349	489	541
145.0	113	97	95	272	432	482
150.0	113	101	97	117	375	422
155.0	109	106	99	111	125	261
160.0	112	108	104	108	115	120
165.0	113	111	105	105	109	112
170.0	114	110	109	108	106	106
175.0	112	112	109	111	110	109
180.0	111	111	111	111	111	111



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	9
5- 10	26
10- 15	42
15- 20	57
20- 25	71
25- 30	82
30- 35	90
35- 40	95
40- 45	97
45- 50	95
50- 55	91
55- 60	83
60- 65	72
65- 70	59
70- 75	44
75- 80	28
80- 85	13
85- 90	4
90- 95	3
95-100	8
100-105	20
105-110	34
110-115	59
115-120	94
120-125	108
125-130	106
130-135	98
135-140	89
140-145	76
145-150	57
150-155	40
155-160	26
160-165	19
165-170	13
170-175	8
175-180	3

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	35
0- 20	135
0- 30	287
0- 40	472
0- 50	664
0- 60	838
0- 70	969
0- 80	1041
0- 90	1058
0-100	1069
0-110	1123
0-120	1276
0-130	1490
0-140	1676
0-150	1810
0-160	1876
0-170	1908
0-180	1919



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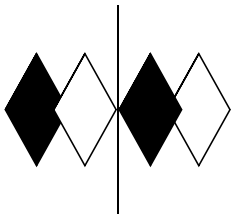
COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC RW	80				70				50			30			10			0	
	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0	
0	108	108	108	108	101	110	110	110	110	86	86	86	73	73	73	61	61	61	55
1	99	94	90	87	92	88	84	81	75	73	71	64	62	61	54	52	51	46	
2	90	82	76	71	83	77	71	66	66	62	58	56	53	50	47	45	43	38	
3	82	72	65	59	76	67	61	55	58	53	49	49	46	42	41	39	36	32	
4	75	64	56	49	69	59	52	47	51	46	41	44	40	36	37	34	31	28	
5	69	57	48	42	63	53	46	40	46	40	36	39	35	31	33	30	27	24	
6	63	51	43	37	58	48	40	35	41	35	31	35	31	27	30	26	24	21	
7	58	46	38	32	54	43	36	30	37	31	27	32	28	24	27	24	21	18	
8	54	42	34	28	50	39	32	27	34	28	24	29	25	21	25	21	19	16	
9	50	38	30	25	47	36	29	24	31	25	22	27	22	19	23	19	17	15	
10	47	35	27	23	44	33	26	21	29	23	19	25	20	17	21	18	15	13	

ALL CANDELA, LUMENS, LUMINANCE, AND VCP VALUES IN THIS REPORT ARE BASED ON ABSOLUTE PHOTOMETRY. THE COEFFICIENT OF UTILIZATION VALUES ARE BASED ON THE TOTAL ABSOLUTE LUMEN OUTPUT OF THIS TEST SAMPLE.

NOTE: THE ZONAL CAVITY CALCULATION TECHNIQUE IS ACCURATE WHEN LUMINAIRES WITH SYMMETRIC CANDELA DISTRIBUTIONS ARE EMPLOYED AND WHEN THE LUMINAIRES ARE LOCATED SYMMETRICALLY THROUGHOUT THE ROOM. THIS UNIT HAS SPECIAL CHARACTERISTICS AND THEREFORE THESE COEFFICIENTS SHOULD BE USED WITH CAUTION.



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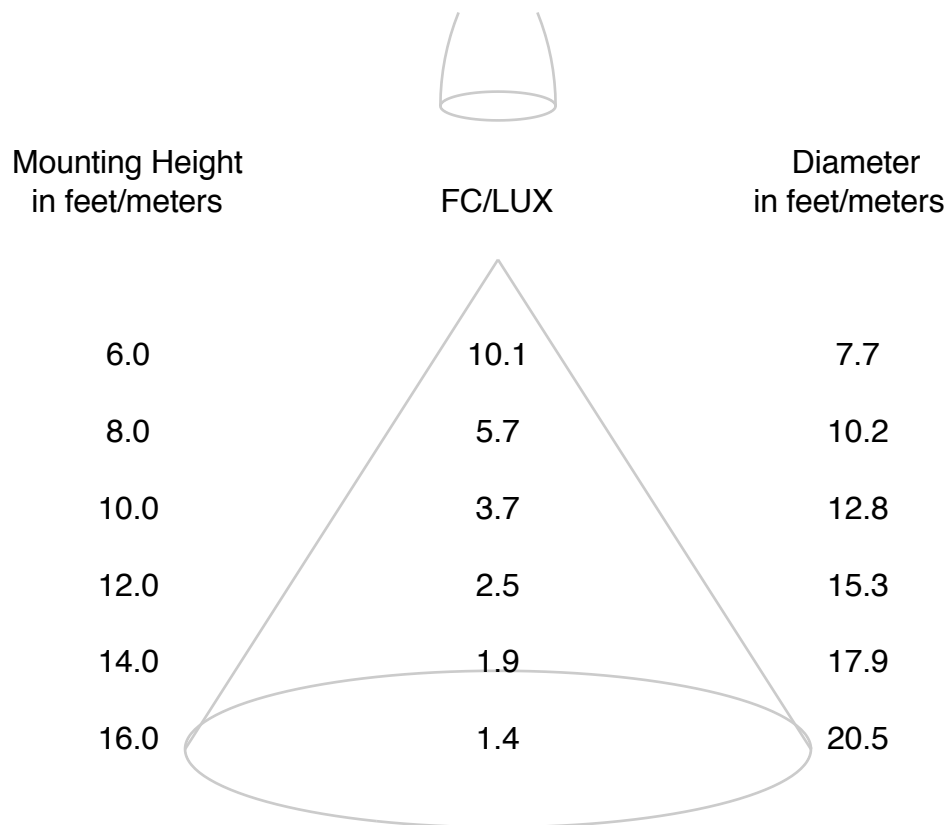
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CONE OF LIGHT DIAGRAM

(diameter shown is where fc/lux value is half the fc/lux at nadir)



If distances are feet, results are footcandles.
 If distances are meters, results are lux.

Note: The candela values used to generate this diagram were obtained by averaging the photometric data into a single plane.