

REPORT NUMBER: ITL89780-GONIOPHOTOMETRY

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ISSUE DATE: 10/12/17

PREPARED FOR: LUMOS LIGHTING

ADDRESS: 145 YUMA STREET
DENVER, CO 80223

CATALOG NUMBER: RP-UP-DN-36

LUMINAIRE: FABRICATED WHITE PAINTED METAL HOUSING WITH INNER AND OUTER CYLINDRICAL SIDES, 8 WHITE CIRCUIT BOARDS WITH A TOTAL OF 168 LEDS MOUNTED ON INNER FACING SURFACE OF OUTER SIDES, 3-PIECE CLEAR FLAT PLASTIC TOP LENS, TRANSLUCENT WHITE PLASTIC BOTTOM LENS. 26" ROUND OPEN CENTER. DRIVER IS EXPOSED AND IN THE OPTICAL COMPARTMENT ON THE 180-DEGREE SIDE OF FIXTURE.

LAMPS: ONE HUNDRED SIXTY-EIGHT WHITE LIGHT EMITTING DIODES (LEDS), AIMED AT THE HORIZON.

INPUT ELECTRICAL: 120.0 VOLTS, 52.9 WATTS, 0.441 AMPS

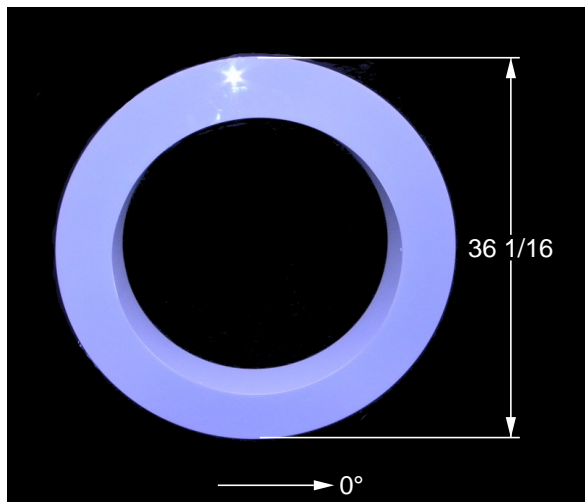
MOUNTING: SUSPENDED

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 1300mA 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.

Checked	<i>M KLOPF</i> TECHNICIAN
Approved	<i>N WHITE</i> LIGHTING ENGINEER

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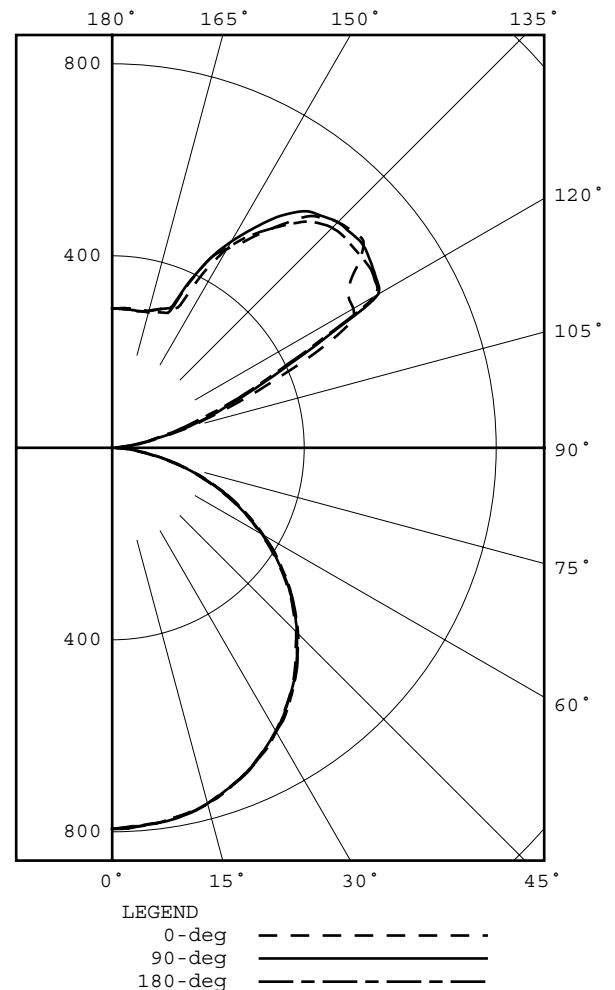
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CANDELA DISTRIBUTION						FLUX
	0.0	45.0	90.0	135.0	180.0	
0	794	794	794	794	794	
5	788	790	789	792	790	75
15	767	768	767	769	768	217
25	715	717	717	718	717	331
35	640	641	641	644	645	402
45	542	543	544	545	548	420
55	423	422	426	430	429	381
65	290	290	292	295	297	289
75	149	149	151	155	155	161
85	28	29	32	34	34	40
90	6	6	8	7	8	
95	25	19	16	17	18	30
105	166	162	155	153	138	165
115	465	392	401	381	388	417
125	606	674	661	654	655	584
135	665	673	665	658	648	509
145	548	569	582	566	552	357
155	322	327	384	383	379	177
165	296	297	295	294	292	84
175	292	292	290	290	290	28
180	290	290	290	290	290	

ZONAL LUMEN ZONE	SUMMARY LUMENS	%FIXT
0- 30	622	13.3
0- 40	1024	21.9
0- 60	1824	39.1
0- 90	2315	49.6
90-120	613	13.1
90-130	1197	25.6
90-150	2062	44.2
90-180	2352	50.4
0-180	4666	100.0

EFFICACY = 88.2 lm/W
 CIE TYPE - GENERAL DIFFUSE
 PLANE : 0-DEG 90-DEG 180-DEG
 SPACING CRITERIA : 1.27 1.28 1.28
 BEAM ANGLE (50%) : 114.7 X 114.5 DEGREES
 FIELD ANGLE (10%) : 160.6 X 161.0 DEGREES





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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
0.0	794	794	794	794	794	794	794	794	794
5.0	788	791	790	789	789	792	792	791	790
10.0	780	782	783	782	783	783	783	783	781
15.0	767	767	768	767	767	768	769	767	768
20.0	744	745	744	745	744	746	745	747	745
25.0	715	717	717	717	717	718	718	718	717
30.0	681	682	683	683	682	683	683	683	683
35.0	640	640	641	642	641	643	644	643	645
40.0	593	593	594	596	597	598	597	599	599
45.0	542	541	543	544	544	545	545	547	548
50.0	486	485	485	487	488	489	489	491	491
55.0	423	424	422	425	426	429	430	429	429
60.0	357	357	358	359	361	363	363	364	364
65.0	290	289	290	291	292	295	295	296	297
70.0	219	218	220	221	222	225	225	226	226
75.0	149	147	149	150	151	154	155	155	155
80.0	78	81	82	83	85	87	89	88	88
85.0	28	28	29	30	32	33	34	34	34
90.0	6	5	6	7	8	8	7	7	8
95.0	25	19	19	17	16	17	17	17	18
100.0	77	86	79	73	67	70	70	69	77
105.0	166	169	162	131	155	152	153	149	138
110.0	284	279	259	236	256	264	261	234	241
115.0	465	425	392	435	401	410	381	382	388
120.0	580	577	625	644	640	620	621	620	631
125.0	606	630	674	674	661	673	654	646	655
130.0	679	672	681	683	672	676	667	648	653
135.0	665	659	673	669	665	663	658	644	648
140.0	629	626	631	631	642	632	625	619	614
145.0	548	562	569	577	582	575	566	570	552
150.0	477	463	485	506	496	497	499	497	481
155.0	322	326	327	350	384	401	383	373	379
160.0	309	308	308	309	308	307	304	301	300
165.0	296	295	297	296	295	296	294	294	292
170.0	291	291	292	291	290	290	289	289	289
175.0	292	291	292	291	290	290	290	290	290
180.0	290	290	290	290	290	290	290	290	290



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	19
5- 10	56
10- 15	92
15- 20	125
20- 25	153
25- 30	177
30- 35	195
35- 40	207
40- 45	211
45- 50	209
50- 55	199
55- 60	182
60- 65	159
65- 70	130
70- 75	98
75- 80	63
80- 85	31
85- 90	9
90- 95	6
95-100	24
100-105	60
105-110	105
110-115	165
115-120	252
120-125	295
125-130	289
130-135	269
135-140	239
140-145	200
145-150	156
150-155	109
155-160	68
160-165	50
165-170	35
170-175	21
175-180	7

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	75
0- 20	292
0- 30	622
0- 40	1024
0- 50	1444
0- 60	1824
0- 70	2114
0- 80	2274
0- 90	2315
0-100	2345
0-110	2510
0-120	2927
0-130	3511
0-140	4020
0-150	4377
0-160	4554
0-170	4639
0-180	4666



INDEPENDENT TESTING LABORATORIES, INC.
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COEFFICIENTS OF UTILIZATION - ZONAL CAVITY METHOD

EFFECTIVE FLOOR CAVITY REFLECTANCE 0.20

RC	80				70				50			30			10			0	
	RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
0	107	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50
1	98	93	89	86	86	90	86	83	80	73	70	68	60	59	57	49	48	47	42
2	89	81	75	70	70	81	75	70	65	63	59	56	53	50	47	43	41	39	34
3	81	71	64	58	58	74	66	59	54	56	51	47	47	43	40	38	35	33	29
4	74	63	55	49	49	68	58	51	46	49	44	40	41	37	34	34	31	28	25
5	68	56	48	42	42	62	52	45	39	44	38	34	37	33	29	30	27	25	21
6	62	50	42	36	36	57	46	39	34	40	34	30	33	29	26	27	24	22	19
7	57	45	37	31	31	53	42	35	30	36	30	26	30	26	22	25	22	19	16
8	53	41	33	28	28	49	38	31	26	33	27	23	28	23	20	23	19	17	15
9	50	37	30	25	25	46	35	28	23	30	24	21	25	21	18	21	18	15	13
10	46	34	27	22	22	43	32	25	21	27	22	18	23	19	16	19	16	14	12

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.

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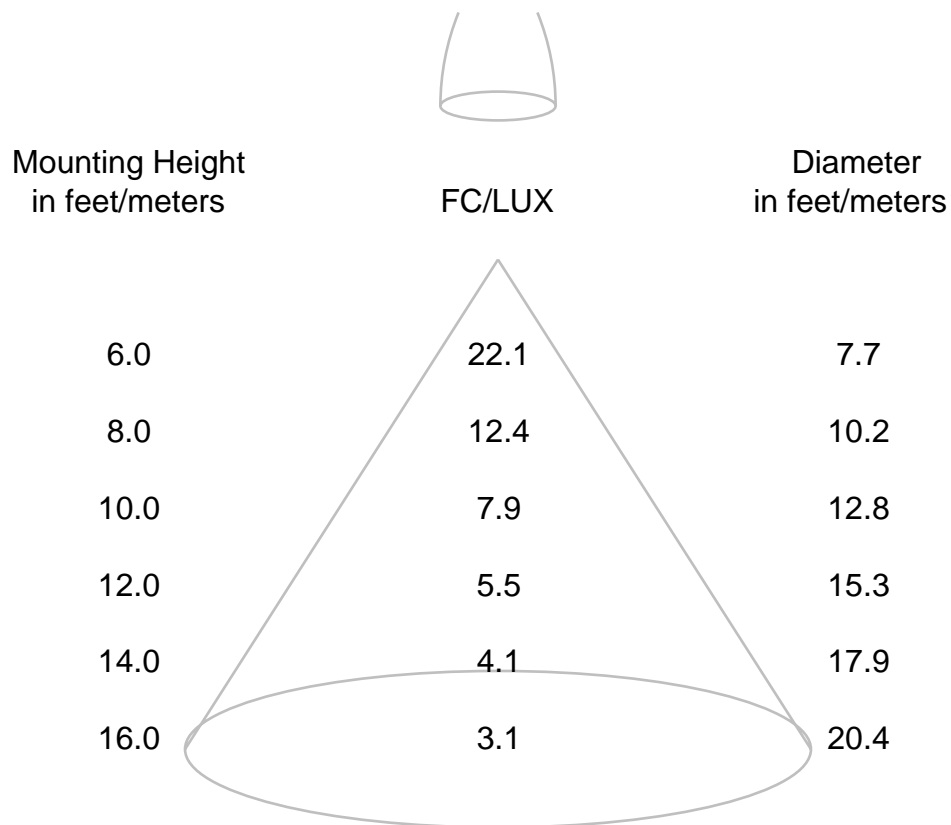
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CONE OF LIGHT DIAGRAM

(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.