

REPORT NUMBER: ITL93704-GONIOPHOTOMETRY

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ISSUE DATE: 06/24/20

PREPARED FOR: LUMOS LIGHTING

ADDRESS: 145 YUMA STREET
DENVER, CO 80223

CATALOG NUMBER: RP-UP-DN-48

LUMINAIRE: FABRICATED WHITE PAINTED METAL HOUSING WITH WHITE PAINTED GENERAL INTERIOR FINISH AND 36.875" DIAMETER OPEN CENTER, FOUR WHITE CIRCUIT BOARDS EACH WITH 36 LEDS, THREE CLEAR FLAT PLASTIC TOP LENSES, FROSTED PLASTIC BOTTOM LENS WITH TWO TRANSLUCENT WHITE PLASTIC INTERIOR MOUNTING RINGS. LENS FROSTED SIDE OUT.

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

INPUT ELECTRICAL: 120.0 VOLTS, 73.3 WATTS, 0.612 AMPS

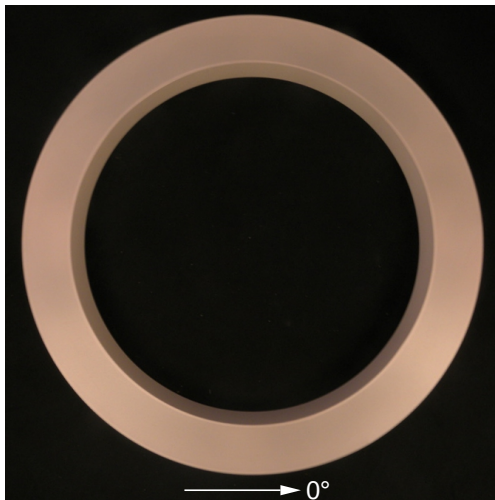
MOUNTING: SUSPENDED

LED DRIVERS: TWO AC ELECTRONICS AC-50CD1.4APC7, DRIVERS HAVE MULTIPLE LEADS, ONLY LINE INPUT AND LED OUTPUT LEADS CONNECTED FOR THIS TEST. CLIENT STATES DRIVERS PROGRAMMED FOR 900mA OUTPUT.

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

TEST PROCEDURE: IESNA LM-79-19

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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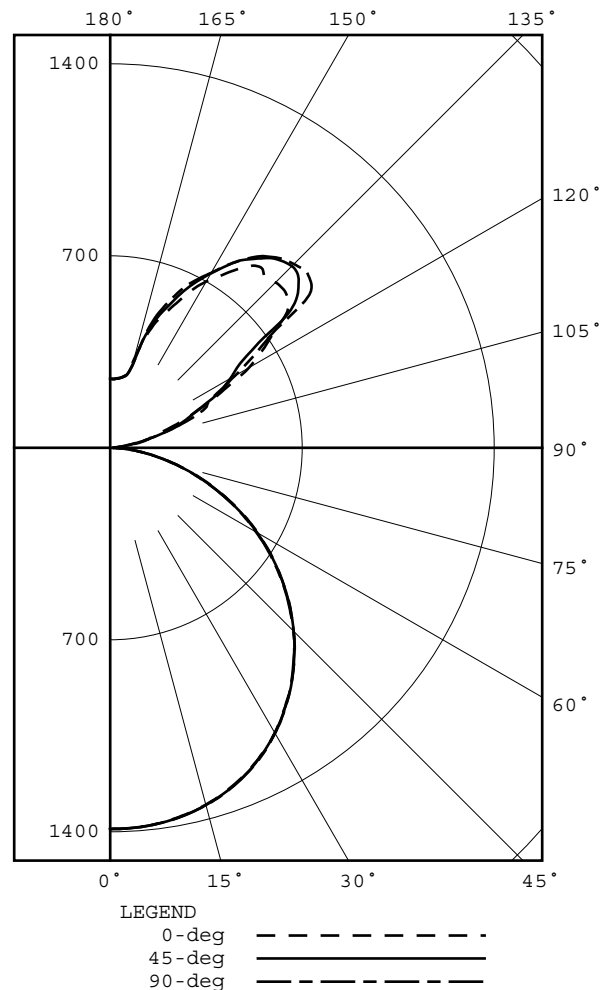
CANDELA DISTRIBUTION

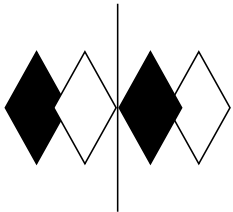
	0.0	22.5	45.0	67.5	90.0	
0	1390	1390	1390	1390	1390	
5	1386	1386	1386	1386	1387	132
15	1347	1347	1348	1349	1349	381
25	1261	1261	1263	1264	1265	582
35	1124	1125	1126	1126	1126	704
45	945	946	946	944	946	729
55	736	734	733	731	729	655
65	502	500	500	496	497	494
75	265	265	264	263	261	280
85	70	69	70	69	69	82
90	11	11	11	11	10	
95	29	28	27	27	27	41
105	159	195	188	169	185	197
115	405	384	391	381	397	393
125	724	706	649	737	711	642
135	853	855	937	973	947	704
145	791	794	835	846	835	515
155	589	618	627	634	650	291
165	333	325	314	325	307	103
175	254	254	253	253	253	24
180	252	252	252	252	252	

FLUX

ZONAL LUMEN ZONE	SUMMARY LUMENS	%FIXT
0- 30	1094	15.7
0- 40	1798	25.9
0- 60	3182	45.8
0- 90	4037	58.1
90-120	632	9.1
90-130	1273	18.3
90-150	2492	35.9
90-180	2911	41.9
0-180	6948	100.0

EFFICACY = 94.8 lm/W
 CIE TYPE - GENERAL DIFFUSE
 PLANE : 0-DEG 90-DEG
 SPACING CRITERIA : 1.28 1.28
 BEAM ANGLE (50%) : 113.6 X 113.0 DEGREES
 FIELD ANGLE (10%) : 162.1 X 162.0 DEGREES





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THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



NVLAP LAB CODE: 200925-0

INDEPENDENT TESTING LABORATORIES, INC.
4066 CAMELOT CIRCLE, LONGMONT, CO 80504 USA

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

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LUMINANCE DATA IN CANDELA/SQ M			
ANGLE IN DEG	AVERAGE 0-DEG	AVERAGE 45-DEG	AVERAGE 90-DEG
45	1466.	1468.	1468.
55	1142.	1137.	1131.
65	779.	776.	771.
75	411.	410.	405.
85	109.	109.	107.



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CANDELA DISTRIBUTION
LATERAL ANGLE

	0.0	22.5	45.0	67.5	90.0
0.0	1390	1390	1390	1390	1390
5.0	1386	1386	1386	1386	1387
10.0	1371	1372	1373	1373	1373
15.0	1347	1347	1348	1349	1349
20.0	1310	1309	1312	1312	1313
25.0	1261	1261	1263	1264	1265
30.0	1200	1199	1201	1201	1202
35.0	1124	1125	1126	1126	1126
40.0	1041	1040	1040	1039	1038
45.0	945	946	946	944	946
50.0	845	844	843	841	840
55.0	736	734	733	731	729
60.0	622	620	618	616	614
65.0	502	500	500	496	497
70.0	384	382	379	377	375
75.0	265	265	264	263	261
80.0	160	158	158	156	157
85.0	70	69	70	69	69
90.0	11	11	11	11	10
95.0	29	28	27	27	27
100.0	109	99	93	98	85
105.0	159	195	188	169	185
110.0	269	298	289	277	319
115.0	405	384	391	381	397
120.0	585	503	505	557	525
125.0	724	706	649	737	711
130.0	846	841	895	966	952
135.0	853	855	937	973	947
140.0	857	856	903	927	909
145.0	791	794	835	846	835
150.0	700	711	733	747	737
155.0	589	618	627	634	650
160.0	487	507	507	500	529
165.0	333	325	314	325	307
170.0	262	262	262	262	263
175.0	254	254	253	253	253
180.0	252	252	252	252	252



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5-DEGREE
ZONAL LUMEN SUMMARY

0- 5	33
5- 10	99
10- 15	161
15- 20	219
20- 25	270
25- 30	312
30- 35	343
35- 40	361
40- 45	368
45- 50	361
50- 55	342
55- 60	312
60- 65	272
65- 70	222
70- 75	168
75- 80	112
80- 85	61
85- 90	21
90- 95	9
95-100	32
100-105	74
105-110	123
110-115	171
115-120	222
120-125	282
125-130	359
130-135	368
135-140	335
140-145	287
145-150	229
150-155	172
155-160	119
160-165	70
165-170	34
170-175	18
175-180	6

10-DEGREE
ZONAL LUMEN SUMMARY

0- 10	132
0- 20	512
0- 30	1094
0- 40	1798
0- 50	2527
0- 60	3182
0- 70	3675
0- 80	3955
0- 90	4037
0-100	4078
0-110	4275
0-120	4668
0-130	5310
0-140	6014
0-150	6529
0-160	6820
0-170	6923
0-180	6948



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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	109	109	109	109	102	102	102	102	88	88	88	75	75	75	64	64	64	58
1	99	95	91	87	92	89	85	82	77	74	72	66	64	62	56	55	53	49
2	90	83	76	71	84	77	72	67	67	63	59	58	54	52	49	47	45	40
3	82	73	65	59	76	68	61	56	59	54	50	51	47	44	43	40	38	34
4	75	64	56	50	70	60	53	47	52	47	42	45	41	37	38	35	32	29
5	69	57	49	43	64	53	46	40	47	41	36	40	36	32	35	31	28	25
6	64	51	43	37	59	48	40	35	42	36	31	36	32	28	31	28	25	22
7	59	46	38	32	55	43	36	31	38	32	28	33	28	25	29	25	22	19
8	54	42	34	28	51	39	32	27	35	29	25	30	26	22	26	22	19	17
9	51	38	31	25	47	36	29	24	32	26	22	28	23	20	24	20	18	15
10	47	35	28	23	44	33	26	22	29	24	20	26	21	18	22	19	16	14

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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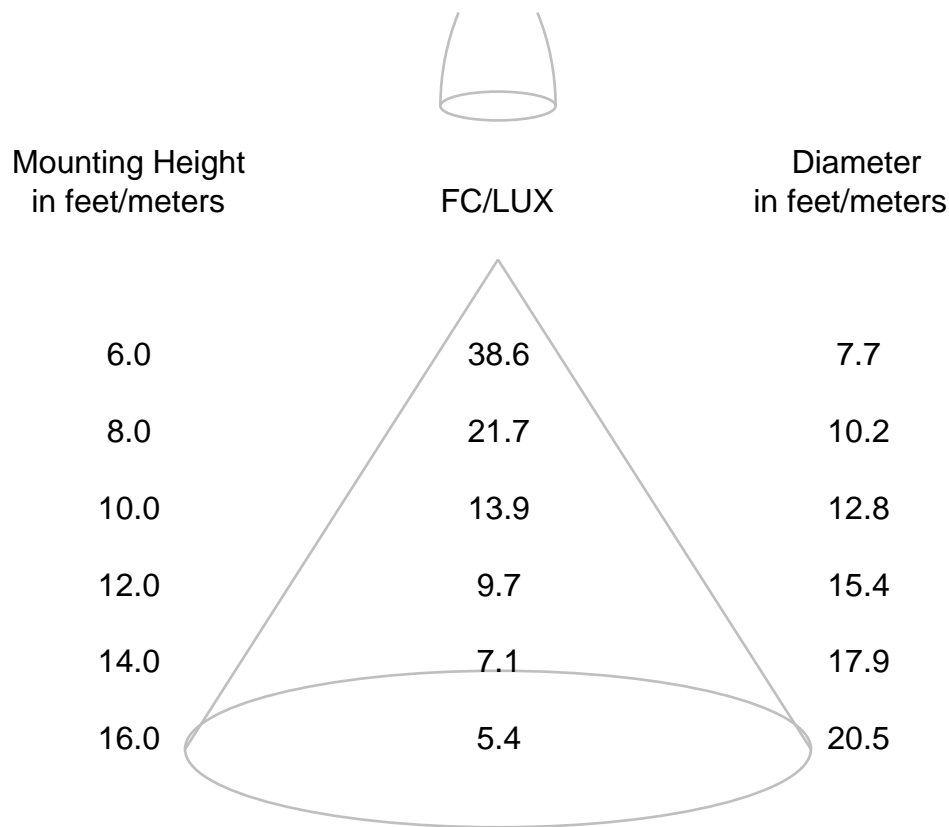
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CONE OF LIGHT DIAGRAM

(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.