



REPORT NUMBER: ITL88518-GONIOPHOTOMETRY

PAGE: 1 OF 6

ISSUE DATE: 10/18/16

PREPARED FOR: LUMOS LIGHTING

CATALOG NUMBER: RP-IND-36-3500-WHT

LUMINAIRE: FABRICATED WHITE PAINTED METAL OUTER RING HOUSING/REFLECTOR,  
FABRICATED WHITE PAINTED METAL INNER RING HOUSING/CIRCUIT BOARD  
MOUNT, 4 WHITE CIRCUIT BOARDS EACH WITH 36  
LEDS MOUNTED ON OUT-FACING SURFACE OF INNER  
RING HOUSING. 31.5625" ROUND OPEN CENTER.

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

INPUT ELECTRICAL: 120.0 VOLTS, 48.8 WATTS,  
0.407 AMPS

MOUNTING: SUSPENDED

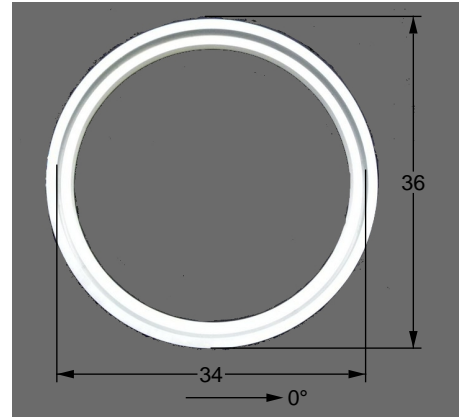
LED DRIVER: ACELEDS AC-40CD1.4APMZ, DRIVER HAS  
MULTIPLE LEADS, ONLY LINE INPUT AND LED  
OUTPUT LEADS CONNECTED FOR THIS TEST.

CLIENT STATES DRIVER PROGRAMMED FOR  
1050mA OUTPUT.

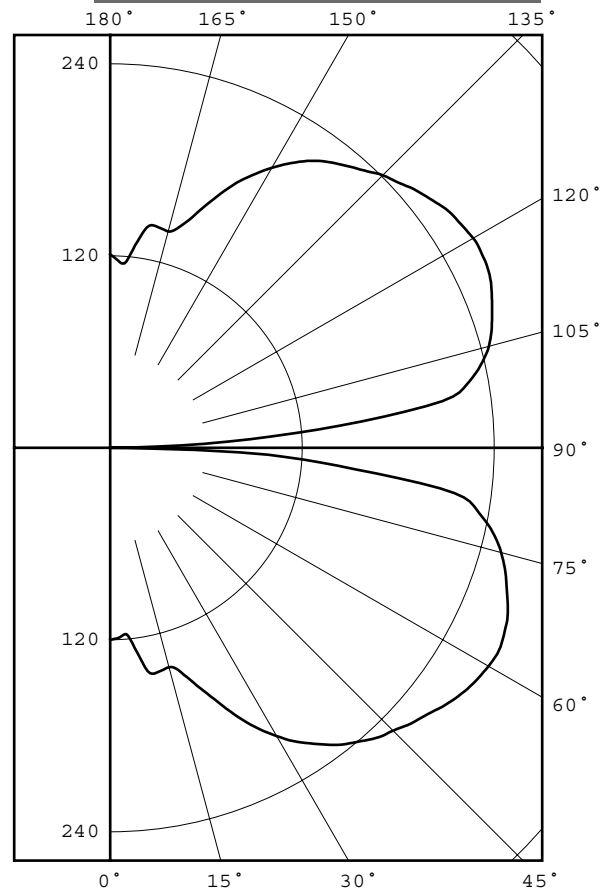
NOTE: DATA SHOWN IS ABSOLUTE FOR THE SAMPLE  
PROVIDED AT RATED INPUT VOLTAGE  
(120VAC, 60Hz) TO THE DRIVER.

TEST PROCEDURE: IESNA LM-79-08

TEST DISTANCE = 20.0 FEET



DEG	CANDELA	LUMENS
0	120	
5	117	12
15	142	41
25	184	86
35	226	142
45	250	194
55	268	240
65	272	269
75	253	266
85	154	160
90	0	
95	130	136
105	245	257
115	261	258
125	258	231
135	241	186
145	219	137
155	181	84
165	140	41
175	117	12
180	121	



ZONAL LUMEN SUMMARY		
ZONE	LUMENS	%FIXT
0- 30	139	5.1
0- 40	281	10.2
0- 60	715	26.0
0- 90	1410	51.2
90-120	651	23.7
90-130	882	32.0
90-150	1205	43.8
90-180	1342	48.8
0-180	2752	100.0

EFFICACY = 56.4 lm/W  
CIE TYPE - GENERAL DIFFUSE  
LUMINAIRE SPACING CRITERION = 2.60  
BEAM ANGLE (50%) : 76.8 DEGREES  
FIELD ANGLE (10%) : 178.6 DEGREES

Checked           M KLOPF            
Approved           R BEATTIE            
Lighting Engineer



**itl boulder**  
THE LIGHT CENTER OF THE INDUSTRY SINCE 1955



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

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

REPORT NUMBER: ITL88518-GONIOPHOTOMETRY  
 ISSUE DATE: 10/18/16  
 PREPARED FOR: LUMOS LIGHTING

PAGE: 2 OF 6

LUMINANCE DATA IN CANDELA/SQ M

ANGLE IN DEG	AVERAGE
45	9810.
55	8933.
65	7779.
75	6796.
85	5738.



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

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

REPORT NUMBER: ITL88518-GONIOPHOTOMETRY  
ISSUE DATE: 10/18/16  
PREPARED FOR: LUMOS LIGHTING

PAGE: 3 OF 6

### CANDELA DISTRIBUTION

0.0	120
5.0	117
10.0	143
15.0	142
20.0	158
25.0	184
30.0	208
35.0	226
40.0	240
45.0	250
50.0	259
55.0	268
60.0	273
65.0	272
70.0	264
75.0	253
80.0	234
85.0	154
90.0	0
95.0	130
100.0	226
105.0	245
110.0	254
115.0	261
120.0	262
125.0	258
130.0	250
135.0	241
140.0	230
145.0	219
150.0	202
155.0	181
160.0	155
165.0	140
170.0	141
175.0	117
180.0	121



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

REPORT NUMBER: ITL88518-GONIOPHOTOMETRY  
ISSUE DATE: 10/18/16  
PREPARED FOR: LUMOS LIGHTING

PAGE: 4 OF 6

5-DEGREE  
ZONAL LUMEN SUMMARY

0- 5	3
5- 10	9
10- 15	17
15- 20	25
20- 25	36
25- 30	50
30- 35	64
35- 40	78
40- 45	91
45- 50	103
50- 55	115
55- 60	125
60- 65	133
65- 70	136
70- 75	135
75- 80	131
80- 85	112
85- 90	48
90- 95	34
95-100	102
100-105	126
105-110	131
110-115	131
115-120	127
120-125	120
125-130	110
130-135	99
135-140	87
140-145	75
145-150	62
150-155	49
155-160	35
160-165	24
165-170	17
170-175	9
175-180	3

10-DEGREE  
ZONAL LUMEN SUMMARY

0- 10	12
0- 20	54
0- 30	139
0- 40	281
0- 50	475
0- 60	715
0- 70	984
0- 80	1250
0- 90	1410
0-100	1546
0-110	1803
0-120	2061
0-130	2291
0-140	2478
0-150	2615
0-160	2699
0-170	2740
0-180	2752



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

REPORT NUMBER: ITL88518-GONIOPHOTOMETRY

PAGE: 5 OF 6

ISSUE DATE: 10/18/16

PREPARED FOR: LUMOS LIGHTING

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	107	107	107	107	99	99	99	99	84	84	84	70	70	70	57	57	57	51
1	94	89	83	79	87	82	77	73	68	65	62	56	54	51	45	43	41	36
2	84	75	67	60	77	69	62	56	57	52	47	47	43	39	37	34	31	26
3	76	64	55	48	69	59	51	44	49	43	38	40	35	31	31	27	24	20
4	68	56	46	39	62	51	43	36	42	36	31	34	29	25	27	23	20	16
5	62	49	39	32	57	45	36	30	37	30	25	30	25	21	23	19	16	13
6	57	43	34	27	52	40	31	25	33	26	21	27	21	17	21	17	14	10
7	52	39	30	23	48	35	27	22	29	23	18	24	19	15	19	15	12	9
8	48	35	26	20	44	32	24	19	27	20	16	22	17	13	17	13	10	7
9	45	31	23	18	41	29	21	16	24	18	14	20	15	11	15	12	9	6
10	42	29	21	16	38	26	19	14	22	16	12	18	13	10	14	10	8	6

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.



**itl boulder**  
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](mailto:itl@itlboulder.com) • WEBSITE: [www.itlboulder.com](http://www.itlboulder.com)

REPORT NUMBER: ITL88518-GONIOPHOTOMETRY  
ISSUE DATE: 10/18/16  
PREPARED FOR: LUMOS LIGHTING

PAGE: 6 OF 6

ADDRESS: 145 YUMA STREET  
DENVER, CO 80223

THIS ITL 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.