

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

Brand: HALO

Report Number: P642544

Luminaire Tested: ML5615LSFL409FS1E - 691WB - 1500LM - 4000K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P642544
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-36)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5615LSFL409FS1E - 691WB - 1500LM - 4000K
Description: ML56 RR, 40D TIR OPTIC, 6" DEADFRONT TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

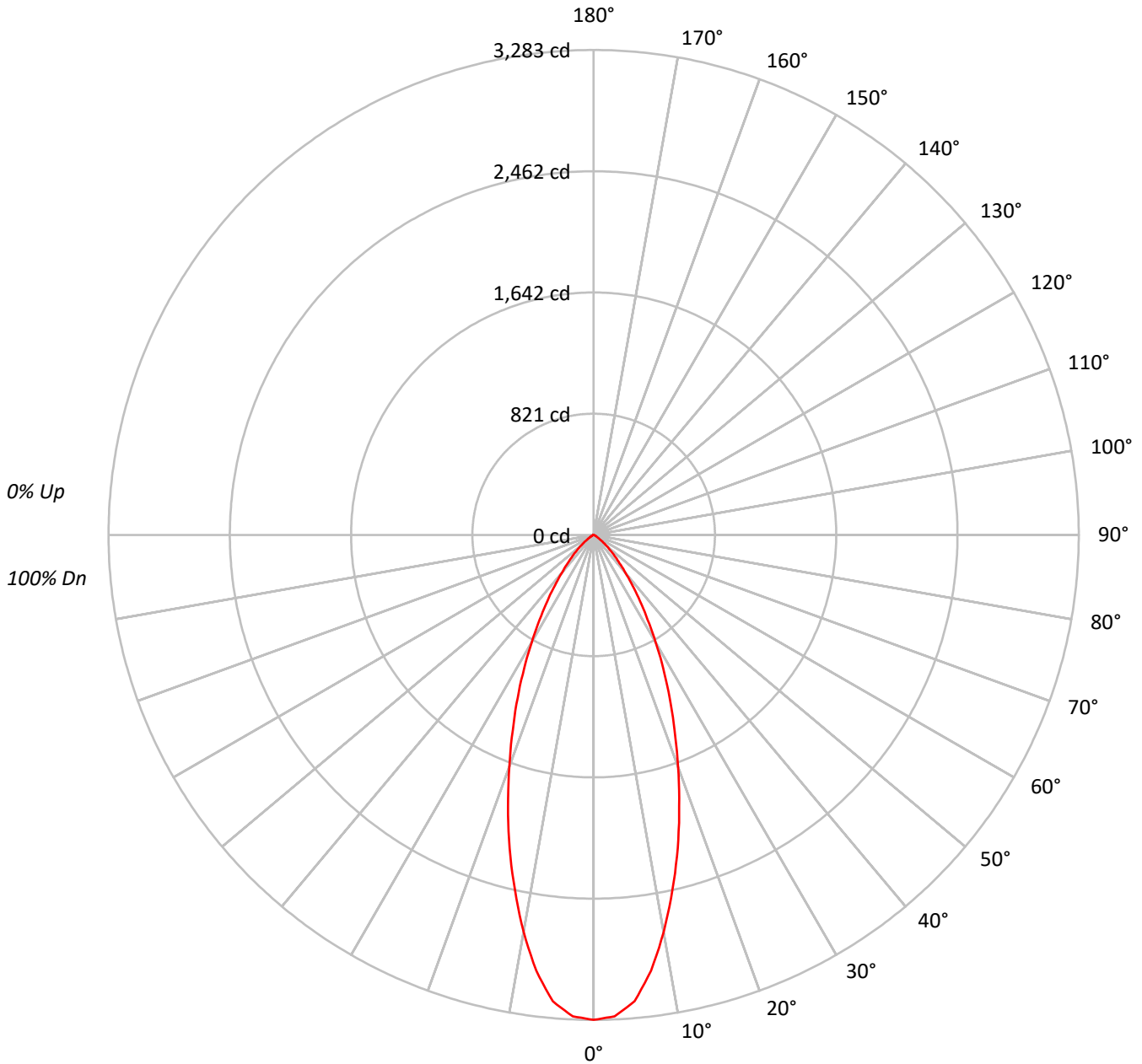
Lumens per Lamp: N/A
Luminaire Lumens: 2024.0 lumens
Efficiency: N/A
Efficacy: 118.4 lumens/watt
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 17.1
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P642544
CATALOG NUMBER: ML5615LSFL409FS1E - 691WB - 1500LM - 4000K

Luminous Intensity Polar Plot





TEST NUMBER: P642544

CATALOG NUMBER: ML5615LSFL409FS1E - 691WB - 1500LM - 4000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
RC	80									50									30									10									0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0																
RCR																																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100																			
1	114	111	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94																			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76																			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71																			
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	67																			
7	84	75	69	65	83	74	69	65	73	68	65	72	68	64	71	67	64	63																			
8	80	71	65	61	79	70	65	61	69	64	61	68	64	61	67	63	60	59																			
9	77	67	62	58	76	67	61	58	66	61	57	65	61	57	64	60	57	56																			
10	73	64	58	55	72	64	58	55	63	58	54	62	57	54	61	57	54	53																			

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	179953
5°	174416
10°	151946
15°	124632
20°	97297
25°	73631
30°	53122
35°	36533
40°	23895
45°	15614
50°	9194
55°	4893
60°	2708
65°	1608
70°	850
75°	381
80°	568
85°	1132

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15614 cd/sqm



TEST NUMBER: P642544

CATALOG NUMBER: ML5615LSFL409FS1E - 691WB - 1500LM - 4000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	287.9	14.2
10°-20°	607.0	30.0
20°-30°	557.9	27.6
30°-40°	346.2	17.1
40°-50°	158.4	7.8
50°-60°	49.8	2.5
60°-70°	12.8	0.6
70°-80°	2.8	0.1
80°-90°	1.2	0.1
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1452.8	71.8
0°-40°	1799.0	88.9
0°-60°	2007.2	99.2
0°-90°	2024.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2024.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	3283	
5°	3170	288
15°	2196	607
25°	1217	558
35°	546	346
45°	201	158
55°	51	50
65°	12	13
75°	2	3
85°	2	1
90°	0	



TEST NUMBER: P642544

CATALOG NUMBER: ML5615LSFL409FS1E - 691WB - 1500LM - 4000K

CANDELA DISTRIBUTION (FULL):

0°	
0°	3282.6
2.5°	3261.4
5°	3169.5
7.5°	2975.2
10°	2729.6
12.5°	2462.8
15°	2196.0
17.5°	1925.7
20°	1667.8
22.5°	1429.3
25°	1217.3
27.5°	1017.6
30°	839.2
32.5°	680.2
35°	545.9
37.5°	431.1
40°	333.9
42.5°	259.7
45°	201.4
47.5°	148.4
50°	107.8
52.5°	74.2
55°	51.2
57.5°	33.6
60°	24.7
62.5°	17.7
65°	12.4
67.5°	7.1
70°	5.3
72.5°	3.5
75°	1.8
77.5°	1.8
80°	1.8
82.5°	1.8
85°	1.8
87.5°	0.0
90°	0.0

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



— 0°-180°

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)