

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: P642649

Luminaire Tested: ML5615LSFL409FS1E - 693WB - 1500LM - 4000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642649  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-40)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 693WB - 1500LM - 4000K  
Description: ML56 RR, 40D TIR OPTIC, 6" WHITE BAFFLE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2022.2 lumens  
Efficiency: N/A  
Efficacy: 118.3 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

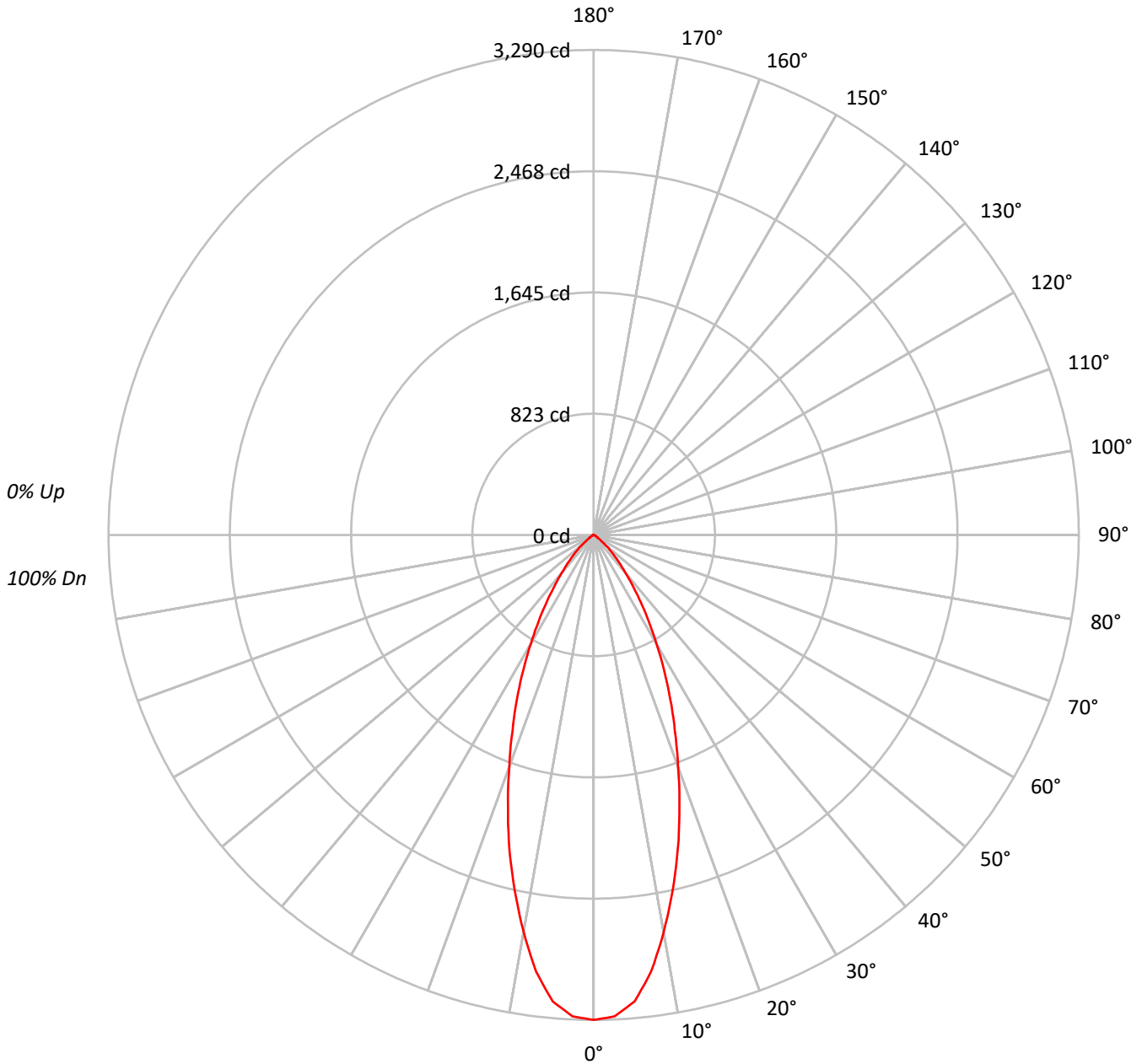
Input Watts (W): 17.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





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**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	100	98	97	96	95	94																			
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	96	92	88	101	95	91	87	92	89	86	90	87	84	88	85	83	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76																			
5	93	85	79	75	91	84	79	75	82	77	74	80	76	73	79	75	73	71																			
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67																			
7	84	75	70	65	83	75	69	65	73	69	65	72	68	65	71	67	64	63																			
8	81	71	66	62	79	71	65	61	70	65	61	69	64	61	68	64	61	59																			
9	77	68	62	58	76	67	62	58	66	61	58	65	61	58	65	60	57	56																			
10	74	64	59	55	73	64	58	55	63	58	55	62	58	55	62	57	54	53																			

**AVERAGE LUMINANCE (cd/sqm):**

	0°
0°	180364
5°	174829
10°	152246
15°	125222
20°	97670
25°	74430
30°	53939
35°	37035
40°	24038
45°	14940
50°	7991
55°	3383
60°	2324
65°	1375
70°	850
75°	741
80°	1105
85°	1132

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 14940 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	288.7	14.3
10°-20°	609.4	30.1
20°-30°	563.5	27.9
30°-40°	351.0	17.4
40°-50°	154.4	7.6
50°-60°	37.8	1.9
60°-70°	11.1	0.5
70°-80°	4.4	0.2
80°-90°	1.9	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°	1461.6	72.3
0°-40°	1812.6	89.6
0°-60°	2004.8	99.1
0°-90°	2022.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2022.2	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	3290	
5°	3177	289
15°	2206	609
25°	1230	563
35°	553	351
45°	193	154
55°	35	38
65°	11	11
75°	4	4
85°	2	2
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	3290.1
2.5°	3268.9
5°	3177.0
7.5°	2987.8
10°	2735.0
12.5°	2471.6
15°	2206.4
17.5°	1934.1
20°	1674.2
22.5°	1439.1
25°	1230.5
27.5°	1032.5
30°	852.1
32.5°	693.0
35°	553.4
37.5°	434.9
40°	335.9
42.5°	259.9
45°	192.7
47.5°	143.2
50°	93.7
52.5°	49.5
55°	35.4
57.5°	28.3
60°	21.2
62.5°	15.9
65°	10.6
67.5°	5.3
70°	5.3
72.5°	5.3
75°	3.5
77.5°	3.5
80°	3.5
82.5°	1.8
85°	1.8
87.5°	1.8
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

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— 0°-180°

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(END OF REPORT)