

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: P642389

Luminaire Tested: ML5615LSFL409FS1E - 592SC - 1200LM - 4000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642389  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-25)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 592SC - 1200LM - 4000K  
Description: ML56 RR, 40D TIR OPTIC, 5" SPECULAR CLEAR TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

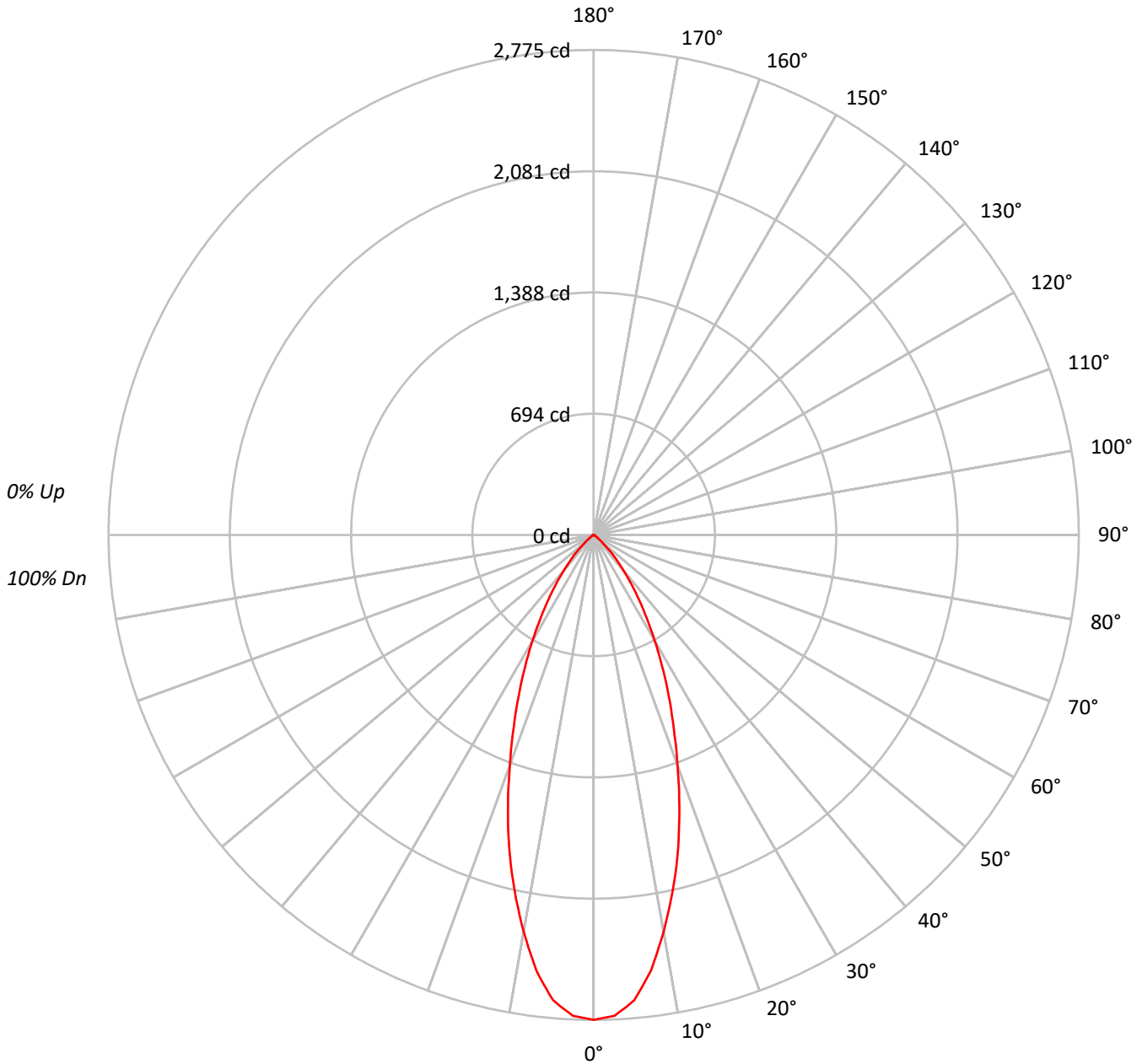
Lumens per Lamp: N/A  
Luminaire Lumens: 1640.5 lumens  
Efficiency: N/A  
Efficacy: 122.4 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

Input Watts (W): 13.4  
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	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94																			
2	108	104	100	97	106	102	99	96	99	96	94	96	94	92	93	91	90	88																			
3	103	97	92	89	101	96	91	88	93	90	87	91	88	85	89	86	84	82																			
4	98	91	86	82	97	90	85	81	88	84	80	86	82	80	84	81	79	77																			
5	94	86	80	76	92	85	80	76	83	79	75	81	78	75	80	77	74	72																			
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	70	68																			
7	85	77	71	67	84	76	70	67	75	70	66	73	69	66	72	69	66	64																			
8	82	72	67	63	80	72	67	63	71	66	63	70	65	62	69	65	62	61																			
9	78	69	63	59	77	68	63	59	67	63	59	67	62	59	66	62	59	57																			
10	75	65	60	56	74	65	60	56	64	59	56	63	59	56	63	59	56	55																			

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

	0°
0°	219069
5°	211807
10°	184734
15°	152369
20°	117711
25°	88339
30°	63598
35°	43395
40°	27133
45°	15417
50°	5477
55°	3165
60°	1816
65°	542
70°	0
75°	0
80°	0
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15417 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	243.0	14.8
10°-20°	513.8	31.3
20°-30°	465.9	28.4
30°-40°	284.6	17.3
40°-50°	107.6	6.6
50°-60°	21.8	1.3
60°-70°	3.9	0.2
70°-80°	0.0	0.0
80°-90°	0.0	0.0
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°	1222.7	74.5
0°-40°	1507.2	91.9
0°-60°	1636.7	99.8
0°-90°	1640.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1640.5	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2775	
5°	2673	243
15°	1864	514
25°	1014	466
35°	450	285
45°	138	108
55°	23	22
65°	3	4
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2775.1
2.5°	2753.5
5°	2672.9
7.5°	2513.2
10°	2304.6
12.5°	2087.4
15°	1864.4
17.5°	1629.9
20°	1401.2
22.5°	1195.5
25°	1014.2
27.5°	848.8
30°	697.7
32.5°	563.9
35°	450.3
37.5°	351.0
40°	263.3
42.5°	198.5
45°	138.1
47.5°	77.7
50°	44.6
52.5°	31.6
55°	23.0
57.5°	15.8
60°	11.5
62.5°	7.2
65°	2.9
67.5°	0.0
70°	0.0
72.5°	0.0
75°	0.0
77.5°	0.0
80°	0.0
82.5°	0.0
85°	0.0
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

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— 0°-180°

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(END OF REPORT)