

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: P642404

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

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642404  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-27)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 592W - 1200LM - 4000K  
Description: ML56 RR, 40D TIR OPTIC, 5" WHITE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

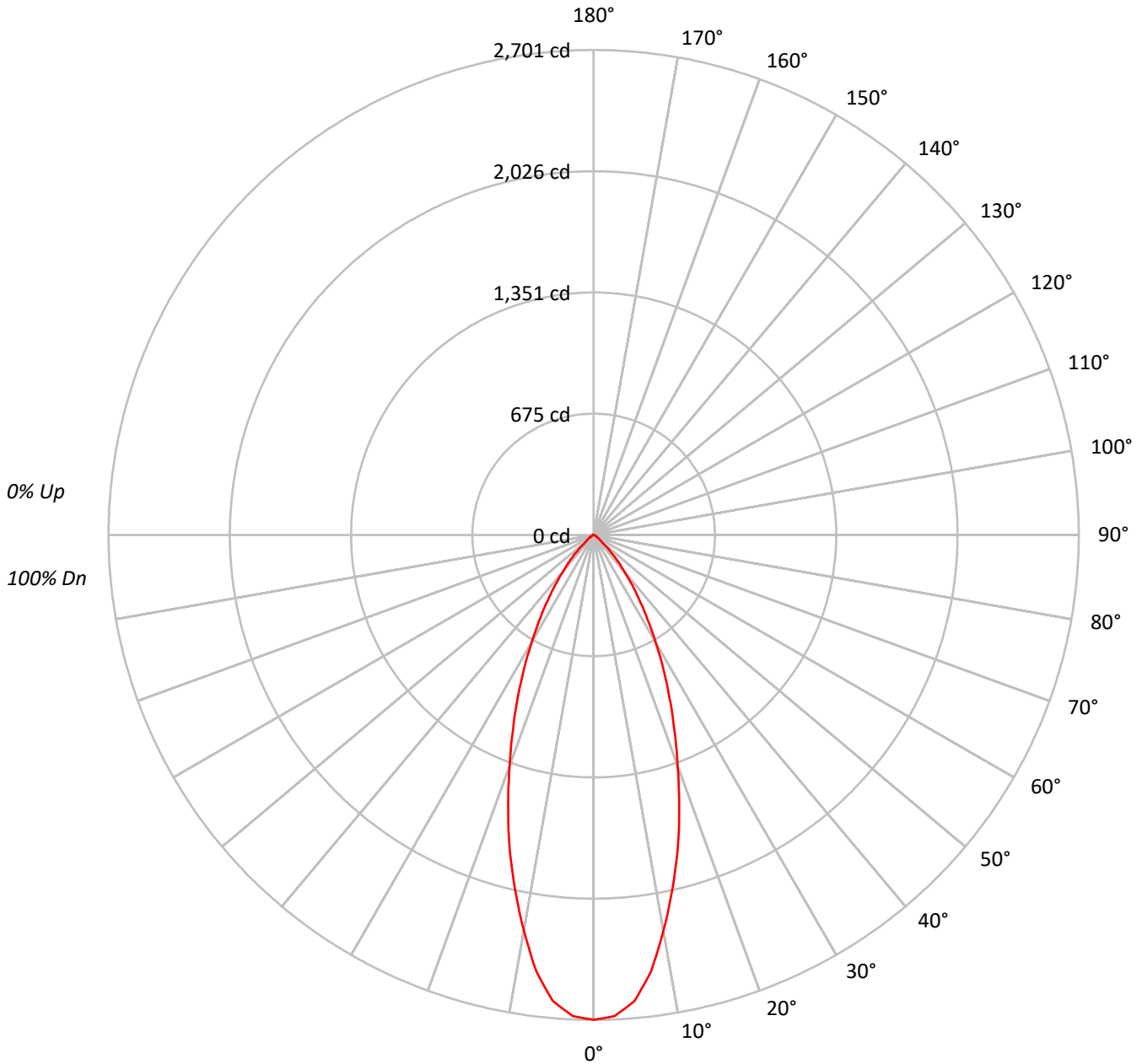
Lumens per Lamp: N/A  
Luminaire Lumens: 1634.8 lumens  
Efficiency: N/A  
Efficacy: 122.0 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

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

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

	0°
0°	213204
5°	206498
10°	179371
15°	147735
20°	114771
25°	87058
30°	62923
35°	43106
40°	27123
45°	15897
50°	6362
55°	4156
60°	2952
65°	1887
70°	1662
75°	1769
80°	1955
85°	1268

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15897 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	236.7	14.5
10°-20°	498.7	30.5
20°-30°	458.2	28.0
30°-40°	282.9	17.3
40°-50°	110.6	6.8
50°-60°	28.6	1.7
60°-70°	11.3	0.7
70°-80°	5.7	0.3
80°-90°	2.1	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°	1193.6	73.0
0°-40°	1476.5	90.3
0°-60°	1615.6	98.8
0°-90°	1634.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1634.8	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2701	
5°	2606	237
15°	1808	499
25°	1000	458
35°	447	283
45°	142	111
55°	30	29
65°	10	11
75°	6	6
85°	1	2
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2700.8
2.5°	2682.1
5°	2605.9
7.5°	2450.6
10°	2237.7
12.5°	2022.0
15°	1807.7
17.5°	1583.4
20°	1366.2
22.5°	1173.5
25°	999.5
27.5°	837.0
30°	690.3
32.5°	559.4
35°	447.3
37.5°	350.9
40°	263.2
42.5°	201.3
45°	142.4
47.5°	82.0
50°	51.8
52.5°	40.3
55°	30.2
57.5°	23.0
60°	18.7
62.5°	15.8
65°	10.1
67.5°	7.2
70°	7.2
72.5°	5.8
75°	5.8
77.5°	4.3
80°	4.3
82.5°	2.9
85°	1.4
87.5°	1.4
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)