

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: P642411

Luminaire Tested: ML5615LSFL409FS1E - 592W - 900LM - 2700K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642411  
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 - 900LM - 2700K  
Description: ML56 RR, 40D TIR OPTIC, 5" WHITE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1137.0 lumens  
Efficiency: N/A  
Efficacy: 108.3 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

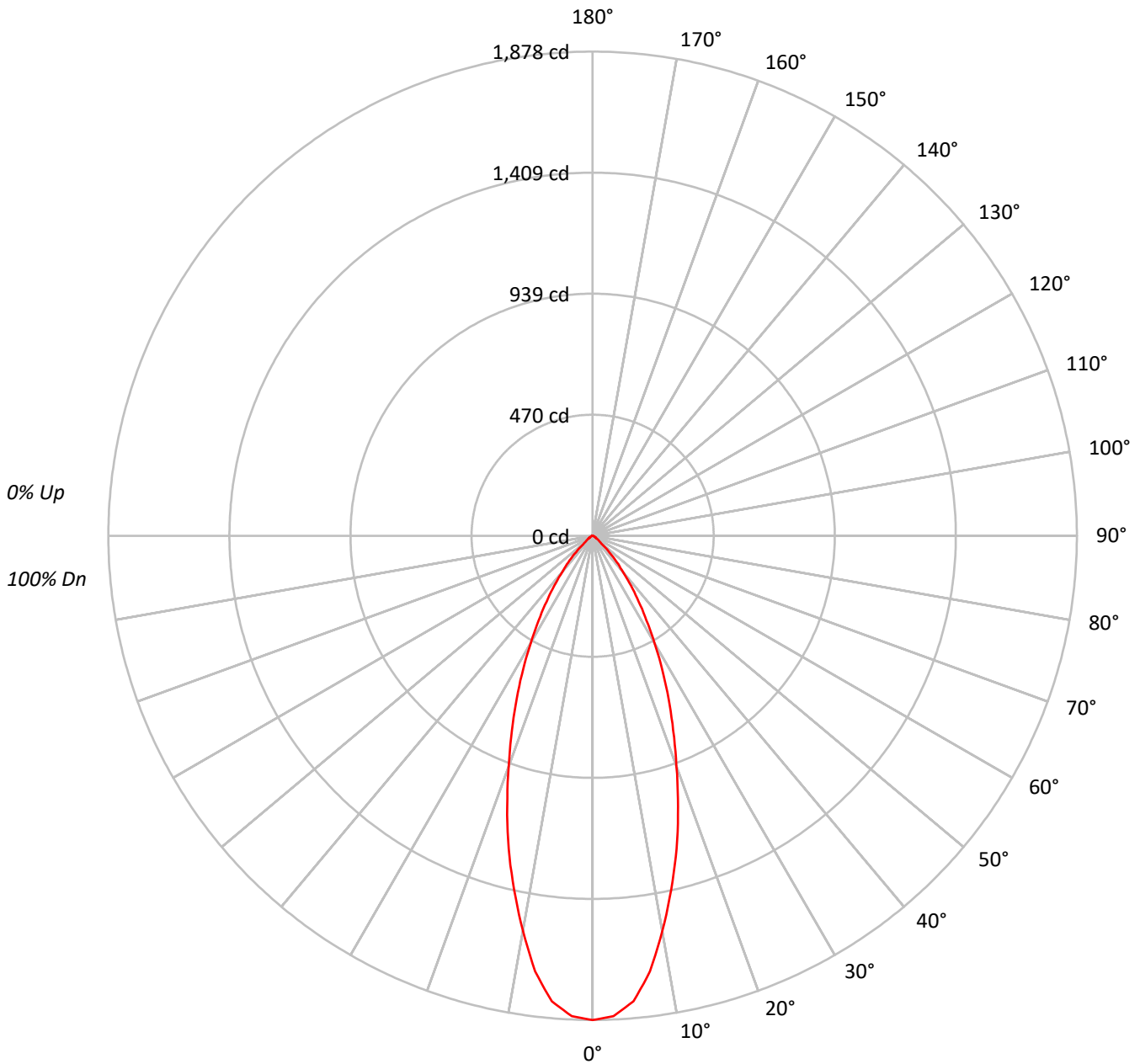
Input Watts (W): 10.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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°	148283
5°	143619
10°	124759
15°	102754
20°	79824
25°	60553
30°	43763
35°	29980
40°	18858
45°	11052
50°	4421
55°	2890
60°	2052
65°	1308
70°	1154
75°	1220
80°	1364
85°	906

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11052 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	164.6	14.5
10°-20°	346.9	30.5
20°-30°	318.6	28.0
30°-40°	196.8	17.3
40°-50°	76.9	6.8
50°-60°	19.9	1.7
60°-70°	7.9	0.7
70°-80°	4.0	0.3
80°-90°	1.5	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°	830.1	73.0
0°-40°	1026.9	90.3
0°-60°	1123.6	98.8
0°-90°	1137.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1137.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1878	
5°	1812	165
15°	1257	347
25°	695	319
35°	311	197
45°	99	77
55°	21	20
65°	7	8
75°	4	4
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	1878.4
2.5°	1865.4
5°	1812.4
7.5°	1704.4
10°	1556.4
12.5°	1406.3
15°	1257.3
17.5°	1101.3
20°	950.2
22.5°	816.2
25°	695.2
27.5°	582.1
30°	480.1
32.5°	389.1
35°	311.1
37.5°	244.1
40°	183.0
42.5°	140.0
45°	99.0
47.5°	57.0
50°	36.0
52.5°	28.0
55°	21.0
57.5°	16.0
60°	13.0
62.5°	11.0
65°	7.0
67.5°	5.0
70°	5.0
72.5°	4.0
75°	4.0
77.5°	3.0
80°	3.0
82.5°	2.0
85°	1.0
87.5°	1.0
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)