

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: P642409

Luminaire Tested: ML5615LSFL409FS1E - 592W - 1500LM - 4000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642409  
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 - 1500LM - 4000K  
Description: ML56 RR, 40D TIR OPTIC, 5" WHITE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

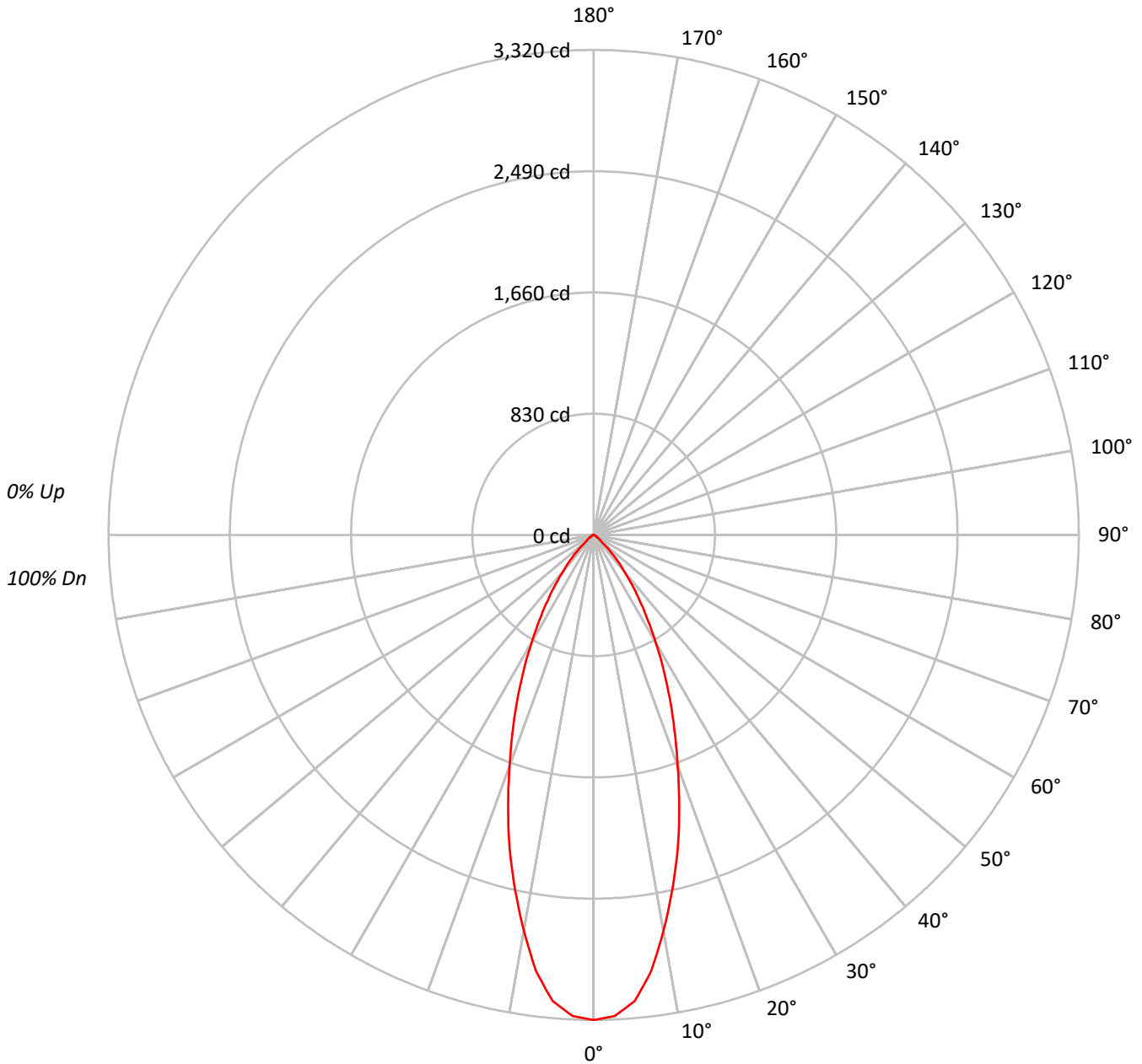
Lumens per Lamp: N/A  
Luminaire Lumens: 2009.9 lumens  
Efficiency: N/A  
Efficacy: 117.5 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

Input Watts (W): 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				20				
RC	80				70				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°	262123
5°	253877
10°	220525
15°	181635
20°	141107
25°	107031
30°	77362
35°	52993
40°	33347
45°	19537
50°	7823
55°	5106
60°	3631
65°	2316
70°	2031
75°	2166
80°	2409
85°	1630

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 19537 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	291.0	14.5
10°-20°	613.1	30.5
20°-30°	563.3	28.0
30°-40°	347.8	17.3
40°-50°	135.9	6.8
50°-60°	35.1	1.7
60°-70°	13.9	0.7
70°-80°	7.0	0.3
80°-90°	2.7	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°	1467.4	73.0
0°-40°	1815.2	90.3
0°-60°	1986.3	98.8
0°-90°	2009.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2009.9	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	3320	
5°	3204	291
15°	2222	613
25°	1229	563
35°	550	348
45°	175	136
55°	37	35
65°	12	14
75°	7	7
85°	2	3
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	3320.5
2.5°	3297.5
5°	3203.8
7.5°	3012.8
10°	2751.1
12.5°	2485.9
15°	2222.5
17.5°	1946.7
20°	1679.7
22.5°	1442.8
25°	1228.8
27.5°	1029.0
30°	848.7
32.5°	687.8
35°	549.9
37.5°	431.4
40°	323.6
42.5°	247.5
45°	175.0
47.5°	100.8
50°	63.7
52.5°	49.5
55°	37.1
57.5°	28.3
60°	23.0
62.5°	19.4
65°	12.4
67.5°	8.8
70°	8.8
72.5°	7.1
75°	7.1
77.5°	5.3
80°	5.3
82.5°	3.5
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)