

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: P642378

Luminaire Tested: ML5615LSFL409FS1E - 592H - 1500LM - 3500K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642378  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-26)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 592H - 1500LM - 3500K  
Description: ML56 RR, 40D TIR OPTIC, 5" HAZE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

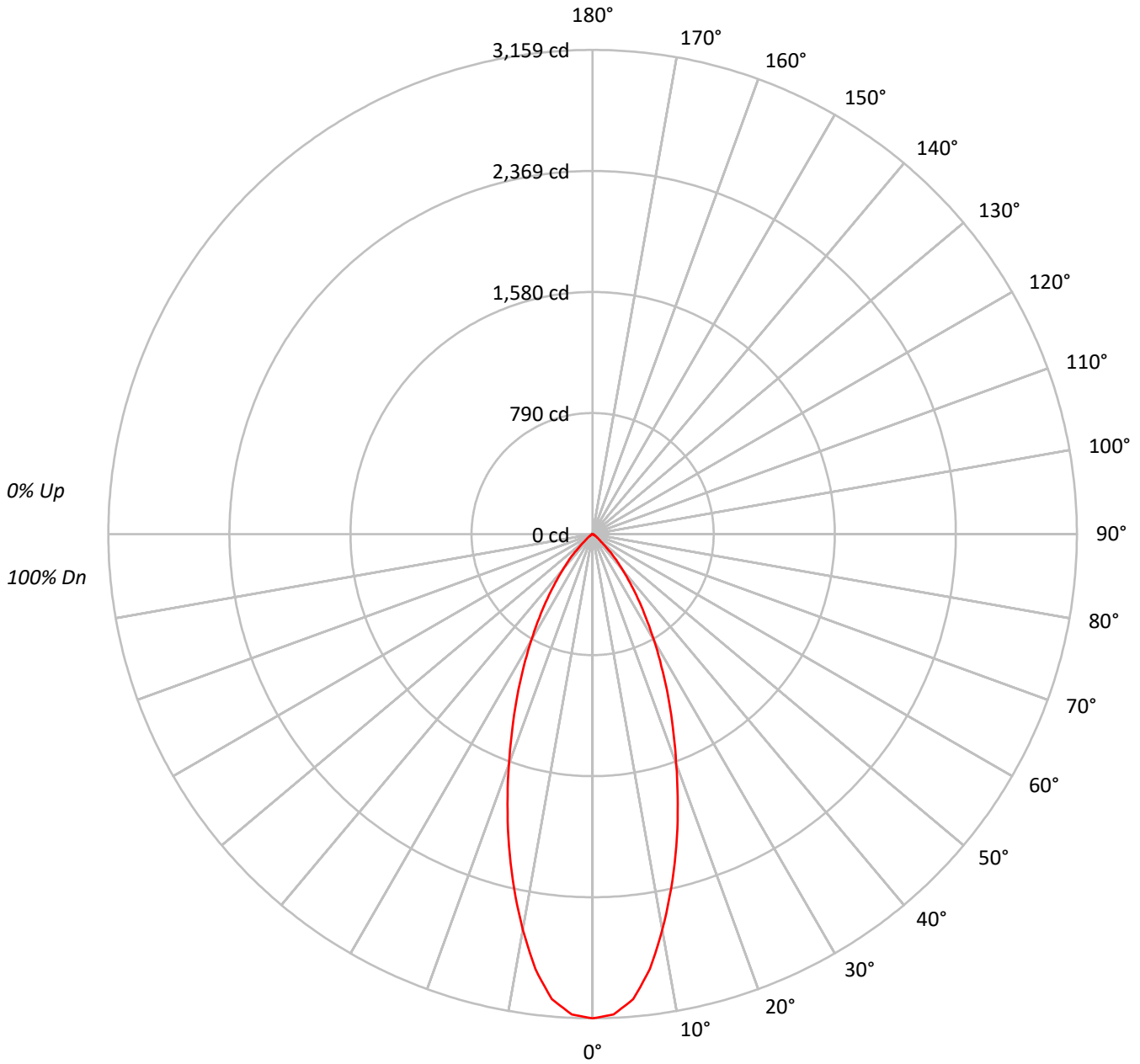
Lumens per Lamp: N/A  
Luminaire Lumens: 1866.3 lumens  
Efficiency: N/A  
Efficacy: 109.1 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

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	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	82	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°	249398
5°	241365
10°	210048
15°	172261
20°	133874
25°	101169
30°	72777
35°	49553
40°	30812
45°	16869
50°	6251
55°	3620
60°	2068
65°	616
70°	0
75°	0
80°	0
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 16869 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	276.7	14.8
10°-20°	582.4	31.2
20°-30°	532.4	28.5
30°-40°	324.9	17.4
40°-50°	120.1	6.4
50°-60°	25.3	1.4
60°-70°	4.4	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°	1391.5	74.6
0°-40°	1716.5	92.0
0°-60°	1861.9	99.8
0°-90°	1866.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1866.3	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	3159	
5°	3046	277
15°	2108	582
25°	1162	532
35°	514	325
45°	151	120
55°	26	25
65°	3	4
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	3159.3
2.5°	3136.3
5°	3045.9
7.5°	2861.9
10°	2620.4
12.5°	2367.4
15°	2107.8
17.5°	1846.6
20°	1593.6
22.5°	1365.2
25°	1161.5
27.5°	971.0
30°	798.4
32.5°	645.7
35°	514.2
37.5°	399.2
40°	299.0
42.5°	226.7
45°	151.1
47.5°	82.1
50°	50.9
52.5°	37.8
55°	26.3
57.5°	18.1
60°	13.1
62.5°	8.2
65°	3.3
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)