

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: P642419

Luminaire Tested: ML5615LSFL409FS1E - 593BB - 1200LM - 4000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642419  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-29)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 593BB - 1200LM - 4000K  
Description: ML56 RR, 40D TIR OPTIC, 5" BLACK BAFFLE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

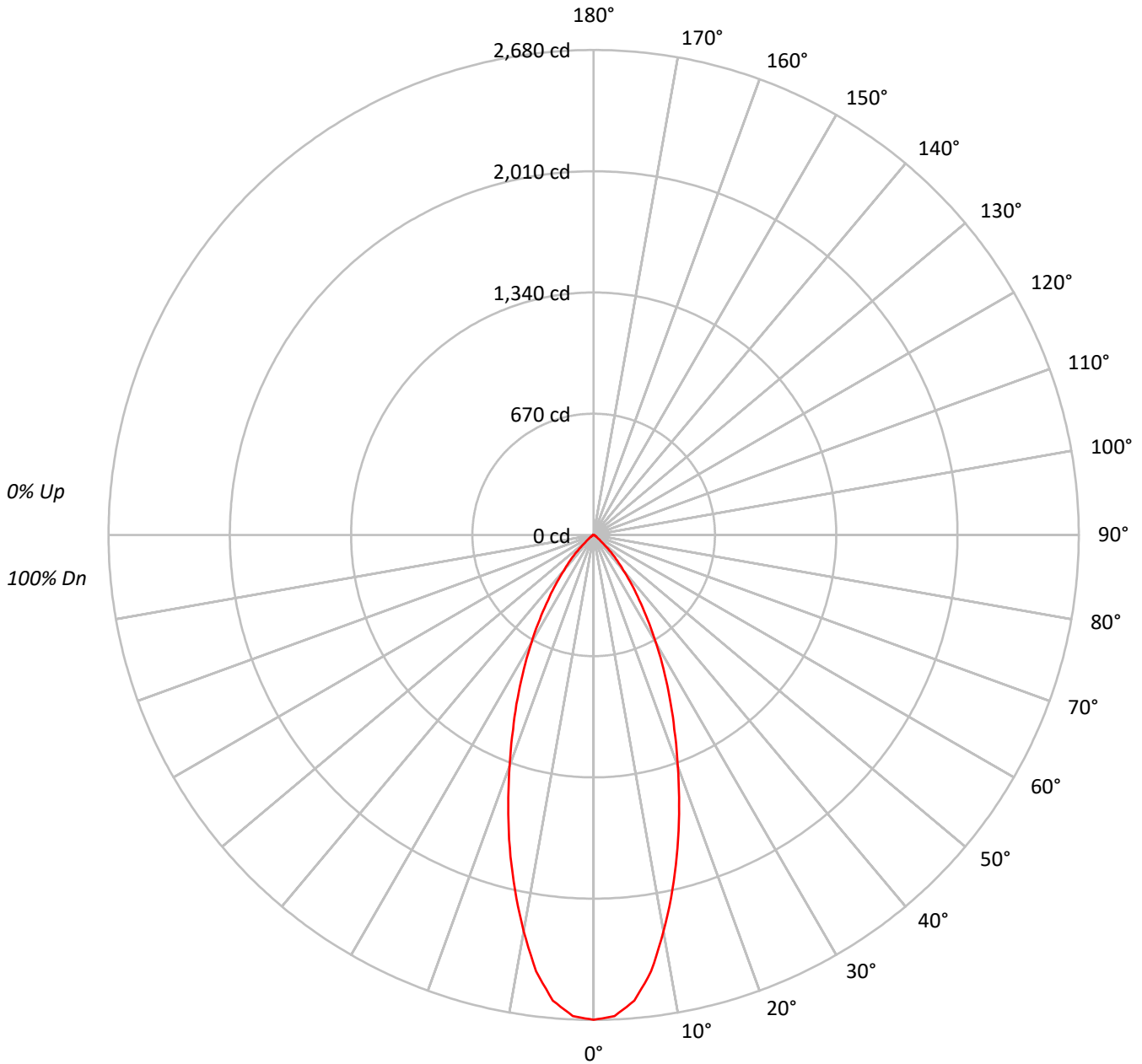
Lumens per Lamp: N/A  
Luminaire Lumens: 1593.1 lumens  
Efficiency: N/A  
Efficacy: 118.9 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

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	93	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	79	84	81	79	77																			
5	94	86	80	76	92	85	80	76	83	79	75	81	78	74	80	77	74	72																			
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68																			
7	85	76	71	67	84	76	70	67	75	70	66	73	69	66	72	68	65	64																			
8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61																			
9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	62	59	57																			
10	75	65	60	56	74	65	60	56	64	59	56	63	59	56	63	59	56	54																			

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

	0°
0°	211522
5°	204691
10°	178337
15°	146305
20°	113998
25°	86614
30°	62704
35°	42296
40°	26247
45°	15105
50°	5305
55°	2973
60°	1595
65°	542
70°	0
75°	0
80°	0
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15105 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	234.9	14.7
10°-20°	494.7	31.1
20°-30°	455.7	28.6
30°-40°	278.7	17.5
40°-50°	104.2	6.5
50°-60°	21.2	1.3
60°-70°	3.7	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°	1185.3	74.4
0°-40°	1464.0	91.9
0°-60°	1589.4	99.8
0°-90°	1593.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1593.1	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2680	
5°	2583	235
15°	1790	495
25°	994	456
35°	439	279
45°	135	104
55°	22	21
65°	3	4
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2679.5
2.5°	2660.8
5°	2583.1
7.5°	2432.0
10°	2224.8
12.5°	2008.9
15°	1790.2
17.5°	1568.6
20°	1357.0
22.5°	1164.2
25°	994.4
27.5°	834.6
30°	687.9
32.5°	554.0
35°	438.9
37.5°	343.9
40°	254.7
42.5°	192.8
45°	135.3
47.5°	73.4
50°	43.2
52.5°	31.7
55°	21.6
57.5°	15.8
60°	10.1
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)