

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: P642596

Luminaire Tested: ML5615LSFL409FS1E - 693BB - 1200LM - 2700K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642596  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-41)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 693BB - 1200LM - 2700K  
Description: ML56 RR, 40D TIR OPTIC, 6" BLACK BAFFLE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

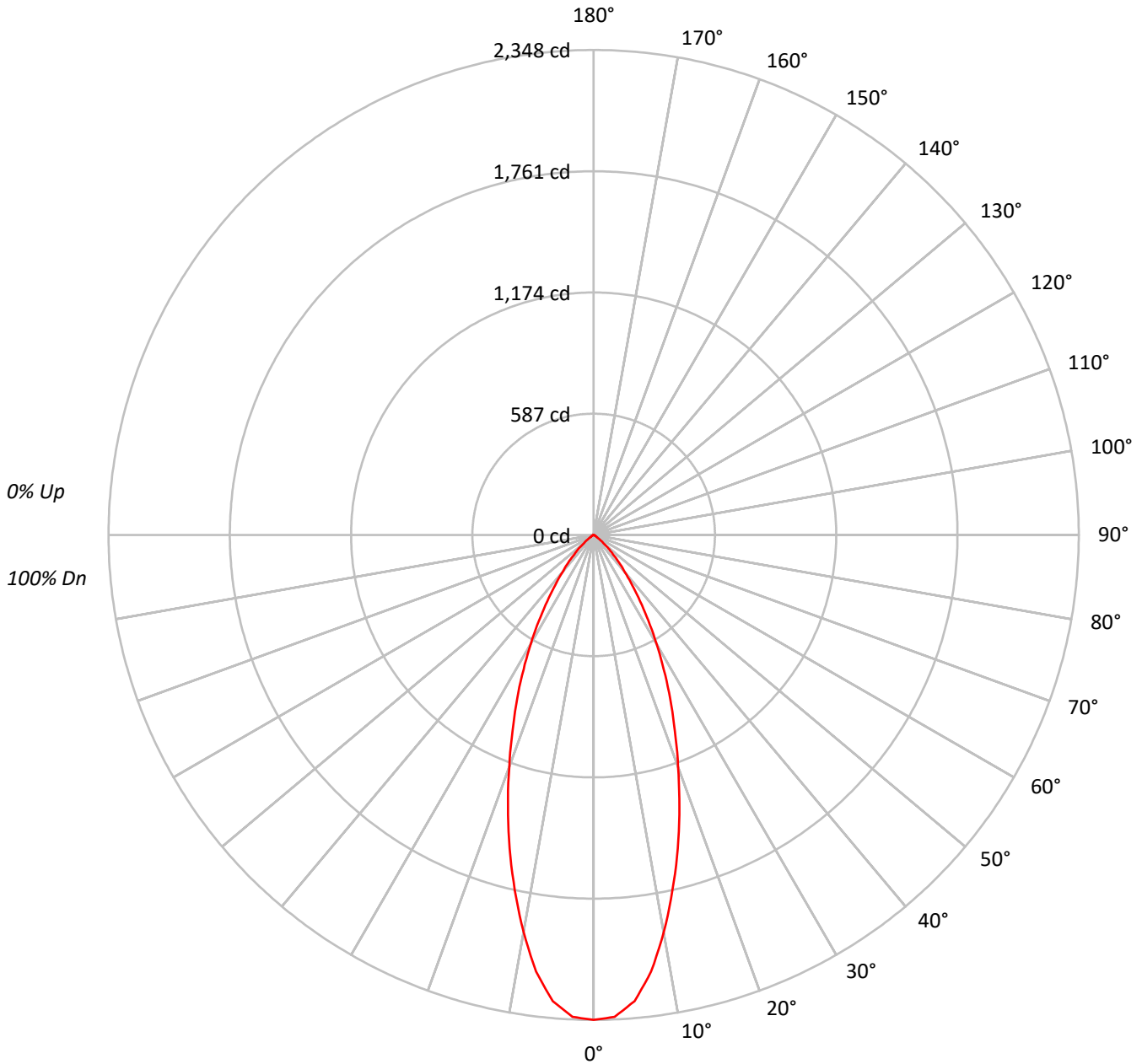
Lumens per Lamp: N/A  
Luminaire Lumens: 1424.1 lumens  
Efficiency: N/A  
Efficacy: 106.3 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

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	106	111	109	107	105	105	103	102	101	100	99	98	97	96	94																			
2	108	104	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88																			
3	103	97	92	88	101	95	91	87	93	89	86	90	87	85	88	86	83	82																			
4	98	91	85	81	96	90	85	81	88	83	80	86	82	79	84	81	78	77																			
5	93	85	80	76	92	84	79	75	83	78	75	81	77	74	79	76	73	72																			
6	89	80	75	70	88	80	74	70	78	73	70	77	73	69	75	72	69	67																			
7	85	76	70	66	84	75	70	66	74	69	66	73	68	65	72	68	65	63																			
8	81	72	66	62	80	71	66	62	70	65	62	69	65	61	68	64	61	60																			
9	77	68	62	59	76	68	62	59	67	62	58	66	61	58	65	61	58	57																			
10	74	65	59	55	73	64	59	55	64	59	55	63	58	55	62	58	55	54																			

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

	0°
0°	128712
5°	124681
10°	108727
15°	89172
20°	69668
25°	52951
30°	38436
35°	26160
40°	16839
45°	10296
50°	5177
55°	2055
60°	1250
65°	493
70°	0
75°	0
80°	0
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10296 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	206.0	14.5
10°-20°	434.5	30.5
20°-30°	401.4	28.2
30°-40°	248.3	17.4
40°-50°	106.7	7.5
50°-60°	23.0	1.6
60°-70°	4.2	0.3
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°	1041.9	73.2
0°-40°	1290.2	90.6
0°-60°	1419.9	99.7
0°-90°	1424.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1424.1	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2348	
5°	2266	206
15°	1571	434
25°	875	401
35°	391	248
45°	133	107
55°	22	23
65°	4	4
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2347.9
2.5°	2335.3
5°	2265.7
7.5°	2131.6
10°	1953.2
12.5°	1762.2
15°	1571.2
17.5°	1378.9
20°	1194.2
22.5°	1026.0
25°	875.4
27.5°	735.0
30°	607.2
32.5°	492.1
35°	390.9
37.5°	306.1
40°	235.3
42.5°	182.2
45°	132.8
47.5°	97.4
50°	60.7
52.5°	31.6
55°	21.5
57.5°	15.2
60°	11.4
62.5°	7.6
65°	3.8
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)