

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: P642431

Luminaire Tested: ML5615LSFL409FS1E - 593SNB - 1200LM - 2700K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642431  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-30)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 593SNB - 1200LM - 2700K  
Description: ML56 RR, 40D TIR OPTIC, 5" SATIN NICKLE BAFFLE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

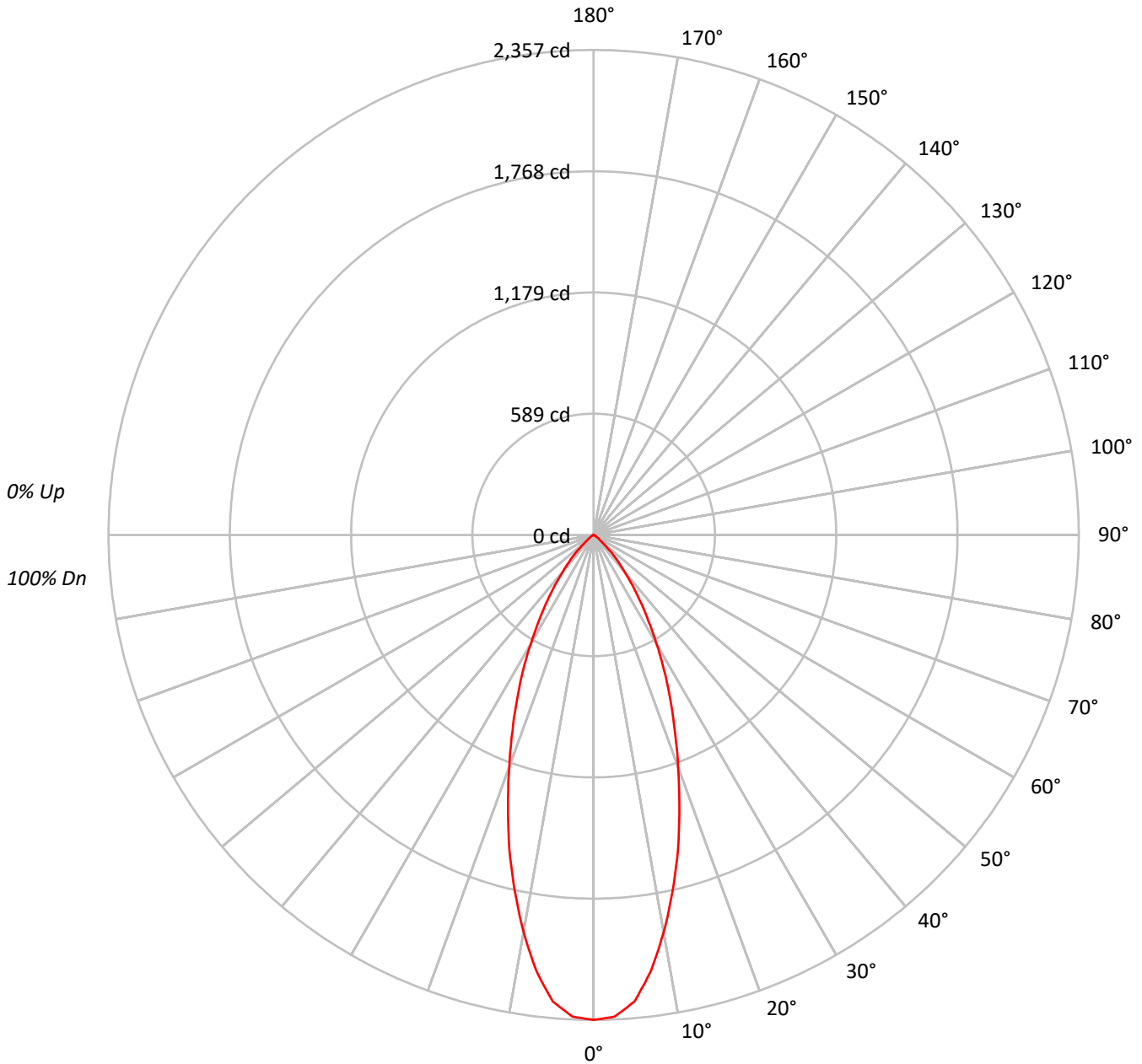
Lumens per Lamp: N/A  
Luminaire Lumens: 1421.7 lumens  
Efficiency: N/A  
Efficacy: 106.1 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

Input Watts (W): 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				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	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	96	91	88	93	89	86	91	87	85	88	86	84	82			
4	98	91	86	82	96	90	85	81	88	83	80	86	82	79	84	81	78	77			
5	93	85	80	76	92	85	79	75	83	78	75	81	77	74	80	76	73	72			
6	89	81	75	71	88	80	74	70	78	74	70	77	73	69	76	72	69	68			
7	85	76	70	66	84	75	70	66	74	69	66	73	69	65	72	68	65	64			
8	81	72	66	62	80	71	66	62	70	65	62	69	65	62	68	64	61	60			
9	78	68	63	59	76	68	62	59	67	62	59	66	62	58	65	61	58	57			
10	74	65	59	56	73	65	59	56	64	59	55	63	59	55	62	58	55	54			

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

	0°
0°	186064
5°	180364
10°	157111
15°	129282
20°	100708
25°	76658
30°	55676
35°	38018
40°	23846
45°	14122
50°	5281
55°	3138
60°	1800
65°	710
70°	300
75°	397
80°	0
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 14122 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	206.7	14.5
10°-20°	436.5	30.7
20°-30°	403.6	28.4
30°-40°	249.8	17.6
40°-50°	97.5	6.9
50°-60°	21.7	1.5
60°-70°	5.0	0.3
70°-80°	0.9	0.1
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°	1046.9	73.6
0°-40°	1296.6	91.2
0°-60°	1415.8	99.6
0°-90°	1421.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1421.7	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2357	
5°	2276	207
15°	1582	437
25°	880	404
35°	394	250
45°	126	97
55°	23	22
65°	4	5
75°	1	1
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2357.0
2.5°	2343.1
5°	2276.1
7.5°	2135.8
10°	1960.0
12.5°	1771.6
15°	1581.9
17.5°	1383.4
20°	1198.8
22.5°	1030.6
25°	880.1
27.5°	741.0
30°	610.8
32.5°	495.7
35°	394.5
37.5°	308.5
40°	231.4
42.5°	175.8
45°	126.5
47.5°	74.6
50°	43.0
52.5°	31.6
55°	22.8
57.5°	16.4
60°	11.4
62.5°	8.9
65°	3.8
67.5°	1.3
70°	1.3
72.5°	1.3
75°	1.3
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)