

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: P640619

Luminaire Tested: ML5612LSFL4097FS1E - 593SNB - 1200LM - 4000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P640619  
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: ML5612LSFL4097FS1E - 593SNB - 1200LM - 4000K  
Description: ML56 RR, 40D TIR OPTIC, 5" SATIN NICKLE BAFFLE TRIM  
Light Source: (1) HCL SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

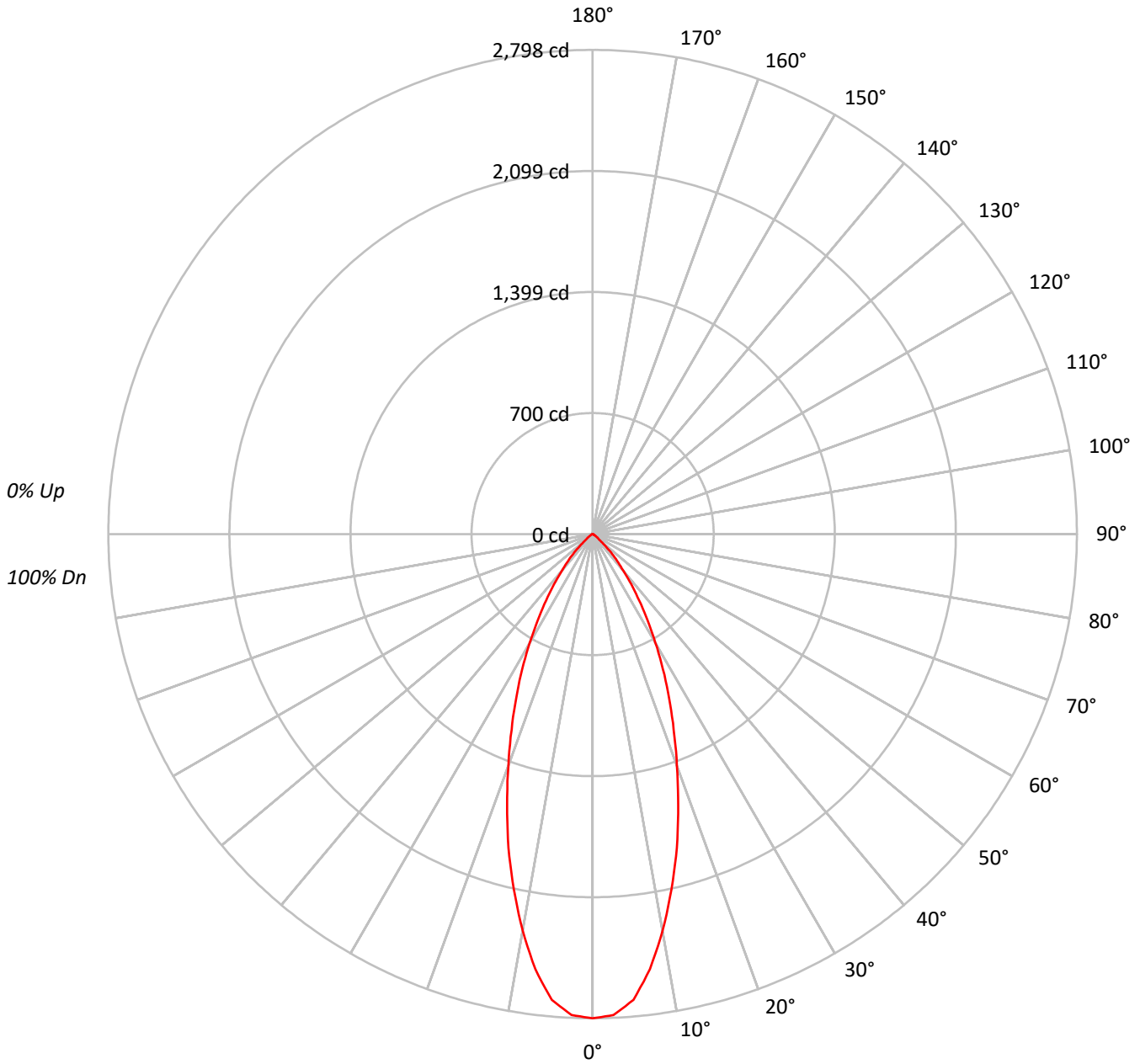
Lumens per Lamp: N/A  
Luminaire Lumens: 1687.6 lumens  
Efficiency: N/A  
Efficacy: 102.3 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.5  
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	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	56	63	59	55	62	58	55	54																			

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

	0°
0°	220892
5°	214121
10°	186513
15°	153481
20°	119551
25°	91004
30°	66095
35°	45139
40°	28308
45°	16757
50°	6263
55°	3716
60°	2131
65°	841
70°	346
75°	458
80°	0
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 16757 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	245.4	14.5
10°-20°	518.2	30.7
20°-30°	479.2	28.4
30°-40°	296.5	17.6
40°-50°	115.7	6.9
50°-60°	25.8	1.5
60°-70°	5.9	0.3
70°-80°	1.0	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°	1242.8	73.6
0°-40°	1539.3	91.2
0°-60°	1680.8	99.6
0°-90°	1687.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1687.6	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2798	
5°	2702	245
15°	1878	518
25°	1045	479
35°	468	297
45°	150	116
55°	27	26
65°	4	6
75°	2	1
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2798.2
2.5°	2781.7
5°	2702.1
7.5°	2535.5
10°	2326.8
12.5°	2103.1
15°	1878.0
17.5°	1642.3
20°	1423.1
22.5°	1223.5
25°	1044.8
27.5°	879.7
30°	725.1
32.5°	588.5
35°	468.4
37.5°	366.3
40°	274.7
42.5°	208.7
45°	150.1
47.5°	88.6
50°	51.0
52.5°	37.5
55°	27.0
57.5°	19.5
60°	13.5
62.5°	10.5
65°	4.5
67.5°	1.5
70°	1.5
72.5°	1.5
75°	1.5
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)