

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: P640544

Luminaire Tested: ML5612LSFL4097FS1E - 591WB - 1200LM - 4000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P640544  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-24)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5612LSFL4097FS1E - 591WB - 1200LM - 4000K  
Description: ML56 RR, 40D TIR OPTIC, 5" DEADFRONT TRIM  
Light Source: (1) HCL SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

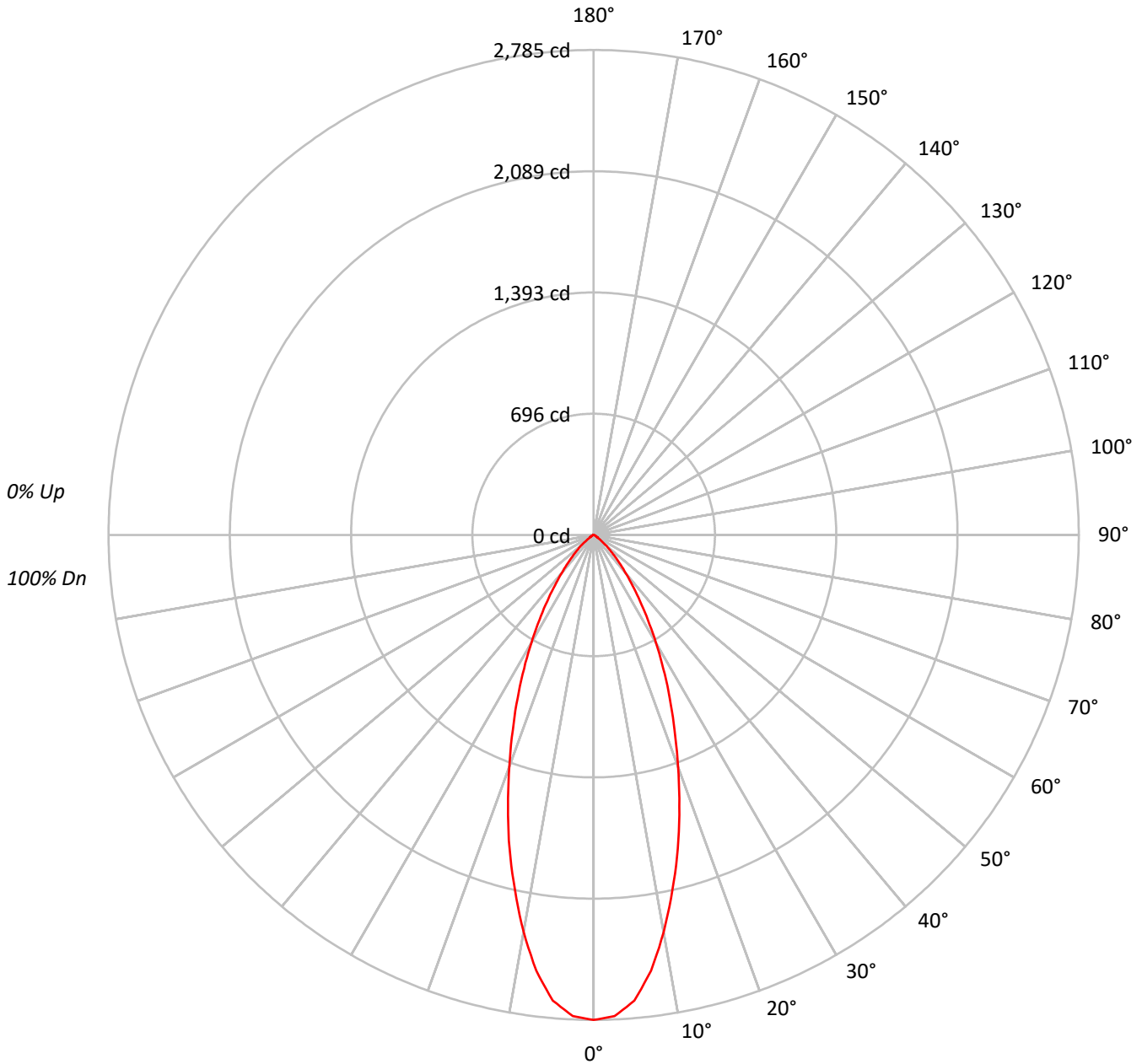
Lumens per Lamp: N/A  
Luminaire Lumens: 1711.7 lumens  
Efficiency: N/A  
Efficacy: 103.7 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

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	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94																			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87																			
3	103	96	91	88	101	95	90	87	92	89	85	90	87	84	88	85	83	81																			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76																			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71																			
6	88	80	74	70	87	79	73	69	77	73	69	76	72	69	75	71	68	67																			
7	84	75	69	65	83	75	69	65	73	68	65	72	68	64	71	67	64	63																			
8	80	71	65	61	79	71	65	61	70	65	61	69	64	61	68	63	60	59																			
9	77	67	62	58	76	67	62	58	66	61	58	65	61	57	64	60	57	56																			
10	74	64	59	55	73	64	58	55	63	58	55	62	58	54	61	57	54	53																			

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

	0°
0°	219866
5°	212734
10°	185583
15°	152525
20°	118811
25°	89976
30°	65147
35°	44706
40°	29246
45°	18443
50°	10697
55°	4542
60°	3079
65°	1961
70°	1039
75°	915
80°	1364
85°	1359

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 18443 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	244.1	14.3
10°-20°	515.2	30.1
20°-30°	473.7	27.7
30°-40°	294.1	17.2
40°-50°	131.8	7.7
50°-60°	36.7	2.1
60°-70°	11.1	0.6
70°-80°	3.4	0.2
80°-90°	1.6	0.1
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°	1233.0	72.0
0°-40°	1527.1	89.2
0°-60°	1695.6	99.1
0°-90°	1711.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1711.7	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2785	
5°	2685	244
15°	1866	515
25°	1033	474
35°	464	294
45°	165	132
55°	33	37
65°	10	11
75°	3	3
85°	2	2
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2785.2
2.5°	2765.6
5°	2684.6
7.5°	2523.9
10°	2315.2
12.5°	2088.5
15°	1866.3
17.5°	1635.1
20°	1414.3
22.5°	1213.2
25°	1033.0
27.5°	864.8
30°	714.7
32.5°	578.1
35°	463.9
37.5°	364.8
40°	283.8
42.5°	219.2
45°	165.2
47.5°	121.6
50°	87.1
52.5°	54.1
55°	33.0
57.5°	25.5
60°	19.5
62.5°	15.0
65°	10.5
67.5°	7.5
70°	4.5
72.5°	3.0
75°	3.0
77.5°	3.0
80°	3.0
82.5°	1.5
85°	1.5
87.5°	1.5
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)