

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: P642367

Luminaire Tested: ML5615LSFL409FS1E - 591WB - 900LM - 3000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642367  
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: ML5615LSFL409FS1E - 591WB - 900LM - 3000K  
Description: ML56 RR, 40D TIR OPTIC, 5" DEADFRONT TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

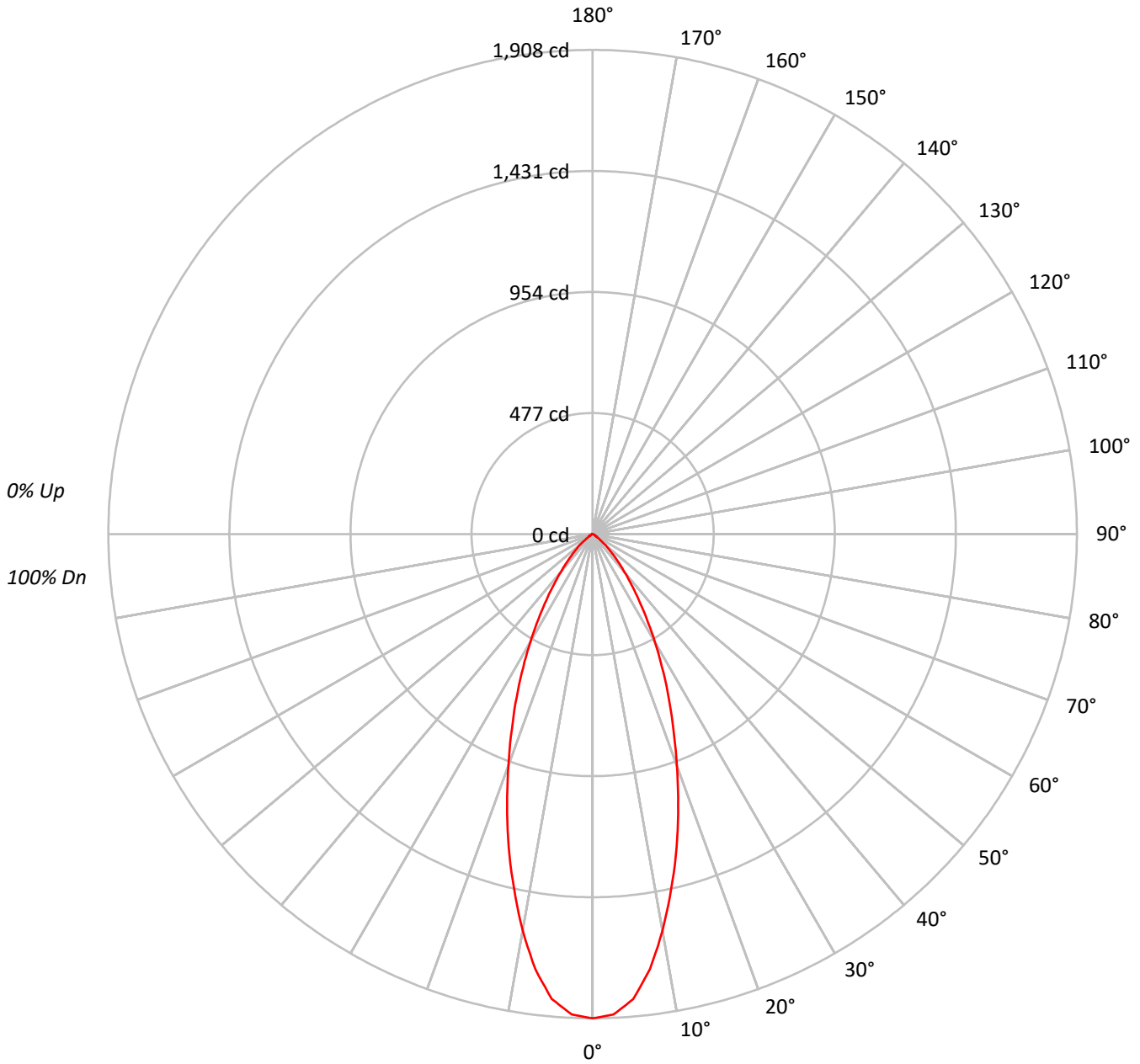
Lumens per Lamp: N/A  
Luminaire Lumens: 1172.6 lumens  
Efficiency: N/A  
Efficacy: 111.7 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

Input Watts (W): 10.5  
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°	150619
5°	145727
10°	127132
15°	104486
20°	81395
25°	61633
30°	44629
35°	30626
40°	20033
45°	12626
50°	7332
55°	3110
60°	2116
65°	1345
70°	716
75°	641
80°	955
85°	906

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12626 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.2	14.3
10°-20°	353.0	30.1
20°-30°	324.5	27.7
30°-40°	201.5	17.2
40°-50°	90.3	7.7
50°-60°	25.1	2.1
60°-70°	7.6	0.6
70°-80°	2.4	0.2
80°-90°	1.1	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°	844.7	72.0
0°-40°	1046.1	89.2
0°-60°	1161.5	99.1
0°-90°	1172.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1172.6	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1908	
5°	1839	167
15°	1278	353
25°	708	325
35°	318	201
45°	113	90
55°	23	25
65°	7	8
75°	2	2
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	1908.0
2.5°	1894.6
5°	1839.0
7.5°	1729.0
10°	1586.0
12.5°	1430.7
15°	1278.5
17.5°	1120.1
20°	968.9
22.5°	831.1
25°	707.6
27.5°	592.4
30°	489.6
32.5°	396.0
35°	317.8
37.5°	249.9
40°	194.4
42.5°	150.2
45°	113.1
47.5°	83.3
50°	59.7
52.5°	37.0
55°	22.6
57.5°	17.5
60°	13.4
62.5°	10.3
65°	7.2
67.5°	5.1
70°	3.1
72.5°	2.1
75°	2.1
77.5°	2.1
80°	2.1
82.5°	1.0
85°	1.0
87.5°	1.0
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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Scaled Data Report



(END OF REPORT)