

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: P642546

Luminaire Tested: ML5615LSFL409FS1E - 691WB - 900LM - 2700K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642546  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-36)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 691WB - 900LM - 2700K  
Description: ML56 RR, 40D TIR OPTIC, 6" DEADFRONT TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

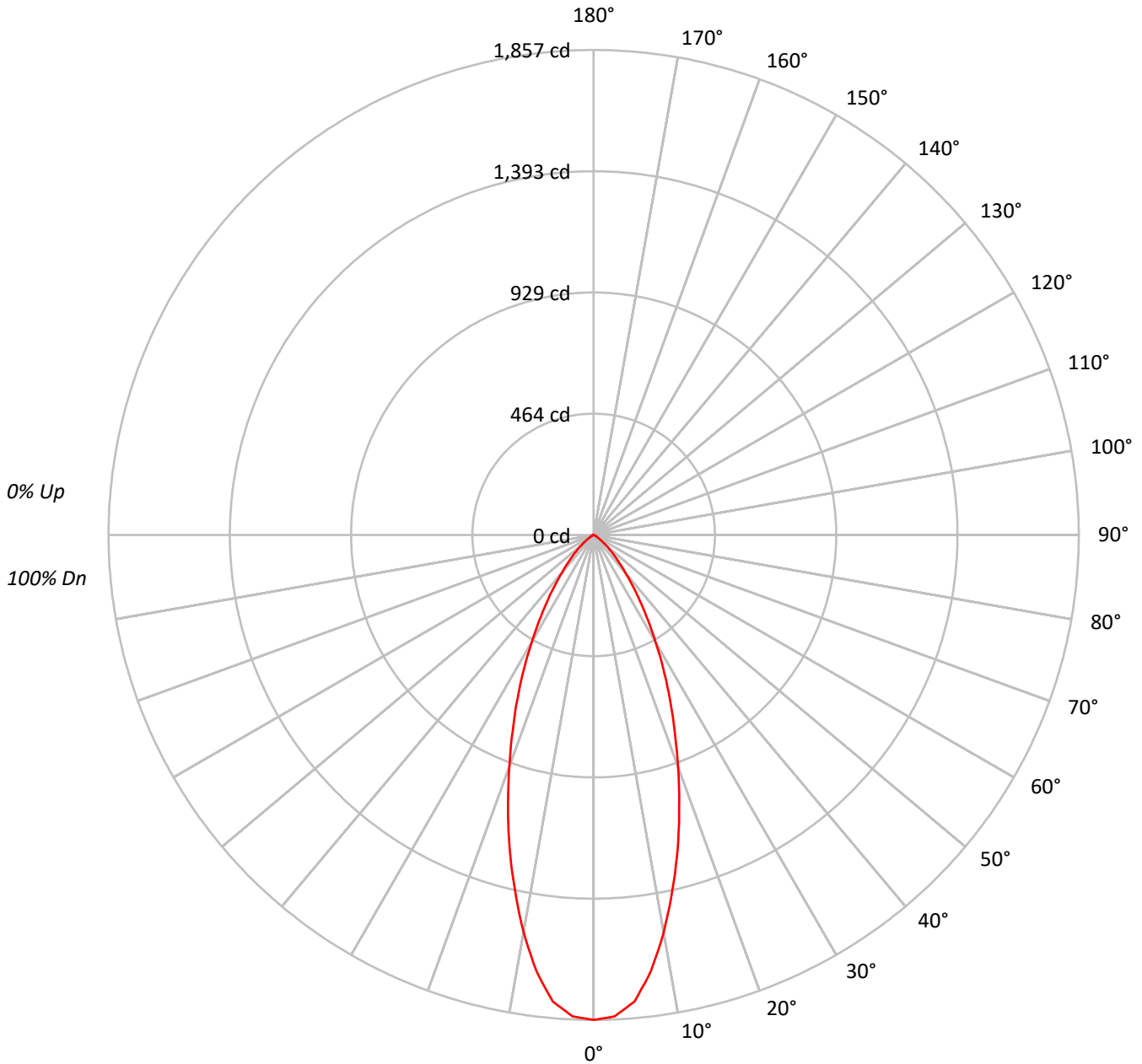
Lumens per Lamp: N/A  
Luminaire Lumens: 1145.0 lumens  
Efficiency: N/A  
Efficacy: 109.0 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	87	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	72	69	76	72	68	75	71	68	67																			
7	84	75	69	65	83	74	69	65	73	68	65	72	68	64	71	67	64	63																			
8	80	71	65	61	79	70	65	61	69	64	61	68	64	61	67	63	60	59																			
9	77	67	62	58	76	67	61	58	66	61	57	65	61	57	64	60	57	56																			
10	73	64	58	55	72	64	58	55	63	58	54	62	57	54	61	57	54	53																			

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

	0°
0°	101801
5°	98668
10°	85959
15°	70506
20°	55042
25°	41652
30°	30049
35°	20666
40°	13518
45°	8830
50°	5202
55°	2772
60°	1535
65°	908
70°	481
75°	212
80°	316
85°	629

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8830 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	162.8	14.2
10°-20°	343.4	30.0
20°-30°	315.6	27.6
30°-40°	195.9	17.1
40°-50°	89.6	7.8
50°-60°	28.2	2.5
60°-70°	7.2	0.6
70°-80°	1.6	0.1
80°-90°	0.7	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°	821.8	71.8
0°-40°	1017.7	88.9
0°-60°	1135.5	99.2
0°-90°	1145.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1145.0	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1857	
5°	1793	163
15°	1242	343
25°	689	316
35°	309	196
45°	114	90
55°	29	28
65°	7	7
75°	1	2
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	1857.0
2.5°	1845.0
5°	1793.0
7.5°	1683.1
10°	1544.2
12.5°	1393.3
15°	1242.3
17.5°	1089.4
20°	943.5
22.5°	808.6
25°	688.6
27.5°	575.7
30°	474.7
32.5°	384.8
35°	308.8
37.5°	243.9
40°	188.9
42.5°	146.9
45°	113.9
47.5°	84.0
50°	61.0
52.5°	42.0
55°	29.0
57.5°	19.0
60°	14.0
62.5°	10.0
65°	7.0
67.5°	4.0
70°	3.0
72.5°	2.0
75°	1.0
77.5°	1.0
80°	1.0
82.5°	1.0
85°	1.0
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)