

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: P642654

Luminaire Tested: ML5615LSFL409FS1E - 693WB - 900LM - 4000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642654  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-40)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 693WB - 900LM - 4000K  
Description: ML56 RR, 40D TIR OPTIC, 6" WHITE BAFFLE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

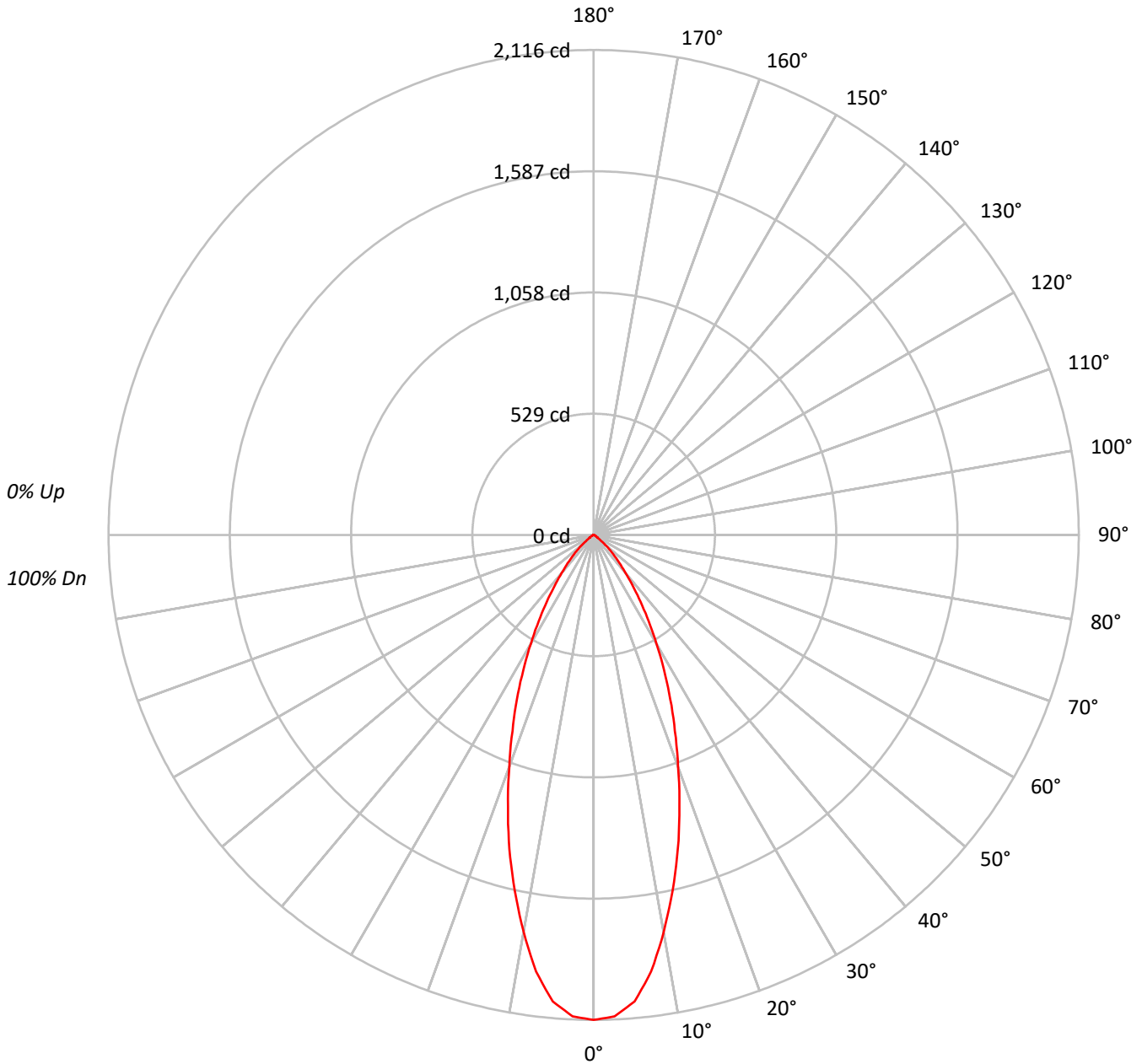
Lumens per Lamp: N/A  
Luminaire Lumens: 1300.5 lumens  
Efficiency: N/A  
Efficacy: 123.9 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

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				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	108	106	111	109	106	104	105	103	101	101	100	98	97	96	95	94			
2	108	103	99	96	106	102	98	95	98	95	93	95	93	91	93	91	89	87			
3	103	96	92	88	101	95	91	87	92	89	86	90	87	84	88	85	83	81			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	78	76			
5	93	85	79	75	91	84	79	75	82	77	74	80	76	73	79	75	73	71			
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67			
7	84	75	70	65	83	75	69	65	73	69	65	72	68	65	71	67	64	63			
8	81	71	66	62	79	71	65	61	70	65	61	69	64	61	68	64	61	59			
9	77	68	62	58	76	67	62	58	66	61	58	65	61	58	65	60	57	56			
10	74	64	59	55	73	64	58	55	63	58	55	62	58	55	62	57	54	53			

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

	0°
0°	115999
5°	112436
10°	97911
15°	80534
20°	62813
25°	47870
30°	34689
35°	23818
40°	15458
45°	9606
50°	5143
55°	2170
60°	1491
65°	882
70°	545
75°	487
80°	726
85°	692

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9606 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	185.7	14.3
10°-20°	391.9	30.1
20°-30°	362.4	27.9
30°-40°	225.7	17.4
40°-50°	99.3	7.6
50°-60°	24.3	1.9
60°-70°	7.1	0.5
70°-80°	2.9	0.2
80°-90°	1.2	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°	940.0	72.3
0°-40°	1165.7	89.6
0°-60°	1289.3	99.1
0°-90°	1300.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1300.5	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2116	
5°	2043	186
15°	1419	392
25°	791	362
35°	356	226
45°	124	99
55°	23	24
65°	7	7
75°	2	3
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	2116.0
2.5°	2102.3
5°	2043.2
7.5°	1921.5
10°	1758.9
12.5°	1589.5
15°	1419.0
17.5°	1243.9
20°	1076.7
22.5°	925.5
25°	791.4
27.5°	664.0
30°	548.0
32.5°	445.7
35°	355.9
37.5°	279.7
40°	216.0
42.5°	167.1
45°	123.9
47.5°	92.1
50°	60.3
52.5°	31.8
55°	22.7
57.5°	18.2
60°	13.6
62.5°	10.2
65°	6.8
67.5°	3.4
70°	3.4
72.5°	3.4
75°	2.3
77.5°	2.3
80°	2.3
82.5°	1.1
85°	1.1
87.5°	1.1
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)