

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: P642461

Luminaire Tested: ML5615LSFL409FS1E - 593WB - 1200LM - 2700K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642461  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-28)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 593WB - 1200LM - 2700K  
Description: ML56 RR, 40D TIR OPTIC, 5" WHITE BAFFLE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1436.7 lumens  
Efficiency: N/A  
Efficacy: 107.2 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

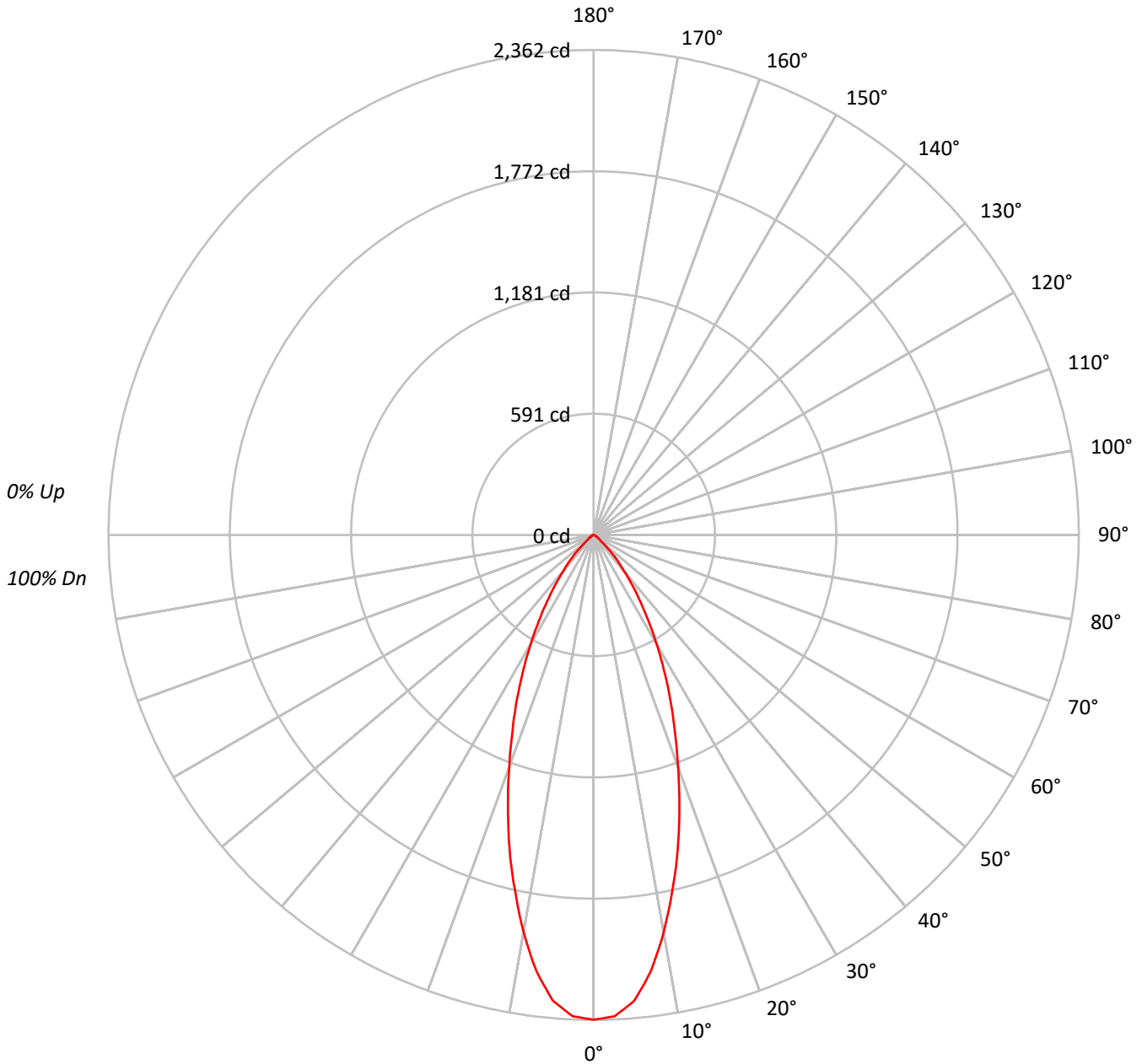
Input Watts (W): 13.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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	99	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	82	79	83	80	78	76			
5	93	85	79	75	92	84	79	75	82	78	74	81	77	73	79	76	73	71			
6	89	80	74	70	87	79	74	70	78	73	69	76	72	69	75	71	68	67			
7	85	76	70	66	83	75	69	66	74	69	65	73	68	65	71	67	64	63			
8	81	72	66	62	80	71	66	62	70	65	61	69	64	61	68	64	61	60			
9	77	68	62	58	76	67	62	58	66	62	58	66	61	58	65	61	58	56			
10	74	65	59	55	73	64	59	55	63	58	55	63	58	55	62	58	55	53			

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

	0°
0°	186419
5°	180419
10°	157464
15°	129421
20°	100842
25°	76902
30°	55685
35°	38027
40°	23722
45°	14122
50°	5588
55°	3661
60°	2589
65°	1662
70°	1454
75°	1556
80°	1727
85°	2264

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 14122 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	207.1	14.4
10°-20°	437.2	30.4
20°-30°	404.1	28.1
30°-40°	249.8	17.4
40°-50°	96.9	6.7
50°-60°	24.9	1.7
60°-70°	9.6	0.7
70°-80°	5.0	0.3
80°-90°	2.2	0.2
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°	1048.4	73.0
0°-40°	1298.1	90.4
0°-60°	1419.8	98.8
0°-90°	1436.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1436.7	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2362	
5°	2277	207
15°	1584	437
25°	883	404
35°	395	250
45°	126	97
55°	27	25
65°	9	10
75°	5	5
85°	2	2
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2361.5
2.5°	2346.4
5°	2276.8
7.5°	2141.4
10°	1964.4
12.5°	1772.1
15°	1583.6
17.5°	1387.6
20°	1200.4
22.5°	1032.1
25°	882.9
27.5°	740.0
30°	610.9
32.5°	494.6
35°	394.6
37.5°	309.9
40°	230.2
42.5°	175.8
45°	126.5
47.5°	70.8
50°	45.5
52.5°	34.2
55°	26.6
57.5°	20.2
60°	16.4
62.5°	12.6
65°	8.9
67.5°	6.3
70°	6.3
72.5°	5.1
75°	5.1
77.5°	3.8
80°	3.8
82.5°	2.5
85°	2.5
87.5°	1.3
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)