

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: P642453

Luminaire Tested: ML5615LSFL409FS1E - 593TBZB - 1500LM - 3500K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642453  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-31)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 593TBZB - 1500LM - 3500K  
Description: ML56 RR, 40D TIR OPTIC, 5" TUSCON BRONZE BAFFLE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT  
Ballast/Driver: -

**Summary**

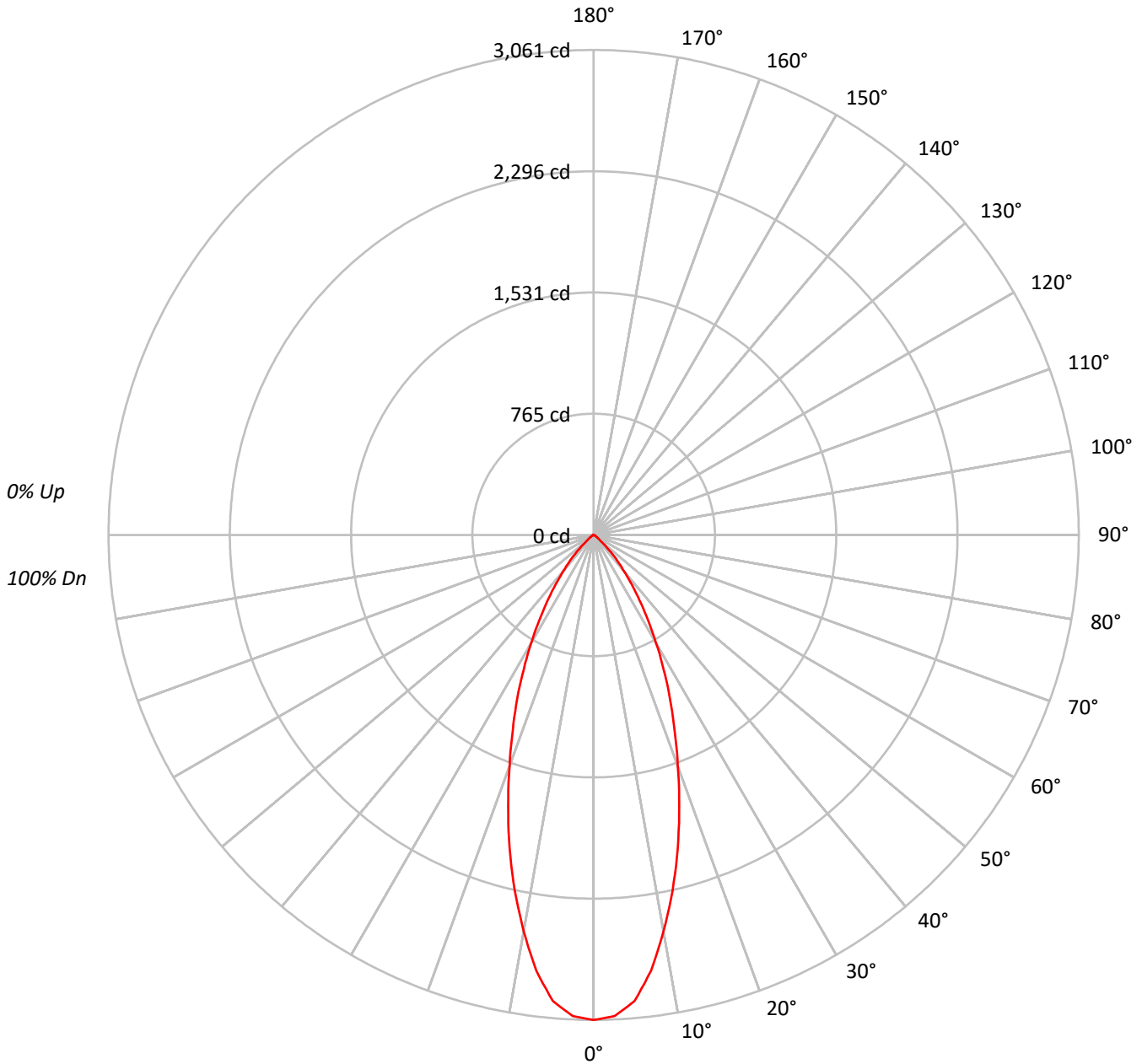
Lumens per Lamp: N/A  
Luminaire Lumens: 1825.2 lumens  
Efficiency: N/A  
Efficacy: 106.7 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

Input Watts (W): 17.1  
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	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94				
2	108	104	100	97	106	102	99	96	99	96	93	96	94	91	93	91	90	88				
3	103	97	92	89	101	96	91	88	93	89	86	91	88	85	89	86	84	82				
4	98	91	86	82	97	90	85	81	88	84	80	86	82	79	84	81	79	77				
5	94	86	80	76	92	85	80	76	83	79	75	81	77	74	80	76	74	72				
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	69	68				
7	85	76	71	67	84	76	70	66	74	70	66	73	69	66	72	68	65	64				
8	81	72	67	63	80	72	66	63	71	66	62	70	65	62	69	65	62	61				
9	78	69	63	59	77	68	63	59	67	62	59	66	62	59	66	62	59	57				
10	75	65	60	56	74	65	60	56	64	59	56	63	59	56	63	59	56	54				

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

	0°
0°	241670
5°	233995
10°	203643
15°	167333
20°	130455
25°	99331
30°	71747
35°	48936
40°	30307
45°	17058
50°	6251
55°	3620
60°	2068
65°	616
70°	0
75°	0
80°	0
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 17058 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	268.2	14.7
10°-20°	565.8	31.0
20°-30°	521.7	28.6
30°-40°	321.0	17.6
40°-50°	119.1	6.5
50°-60°	24.9	1.4
60°-70°	4.4	0.2
70°-80°	0.0	0.0
80°-90°	0.0	0.0
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°	1355.8	74.3
0°-40°	1676.8	91.9
0°-60°	1820.8	99.8
0°-90°	1825.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1825.2	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	3061	
5°	2953	268
15°	2048	566
25°	1140	522
35°	508	321
45°	153	119
55°	26	25
65°	3	4
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	3061.4
2.5°	3040.0
5°	2952.9
7.5°	2773.8
10°	2540.5
12.5°	2298.9
15°	2047.5
17.5°	1794.4
20°	1552.9
22.5°	1332.7
25°	1140.4
27.5°	954.7
30°	787.1
32.5°	637.6
35°	507.8
37.5°	396.0
40°	294.1
42.5°	221.8
45°	152.8
47.5°	82.2
50°	50.9
52.5°	36.2
55°	26.3
57.5°	18.1
60°	13.1
62.5°	8.2
65°	3.3
67.5°	0.0
70°	0.0
72.5°	0.0
75°	0.0
77.5°	0.0
80°	0.0
82.5°	0.0
85°	0.0
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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Scaled Data Report



(END OF REPORT)