

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: P642495

Luminaire Tested: ML5615LSFL409FS1E - 594TBZB - 1200LM - 5000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642495  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-34)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 594TBZB - 1200LM - 5000K  
Description: ML56 RR, 40D TIR OPTIC, 5" TUSCON BRONZE GIMBAL TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT  
Ballast/Driver: -

**Summary**

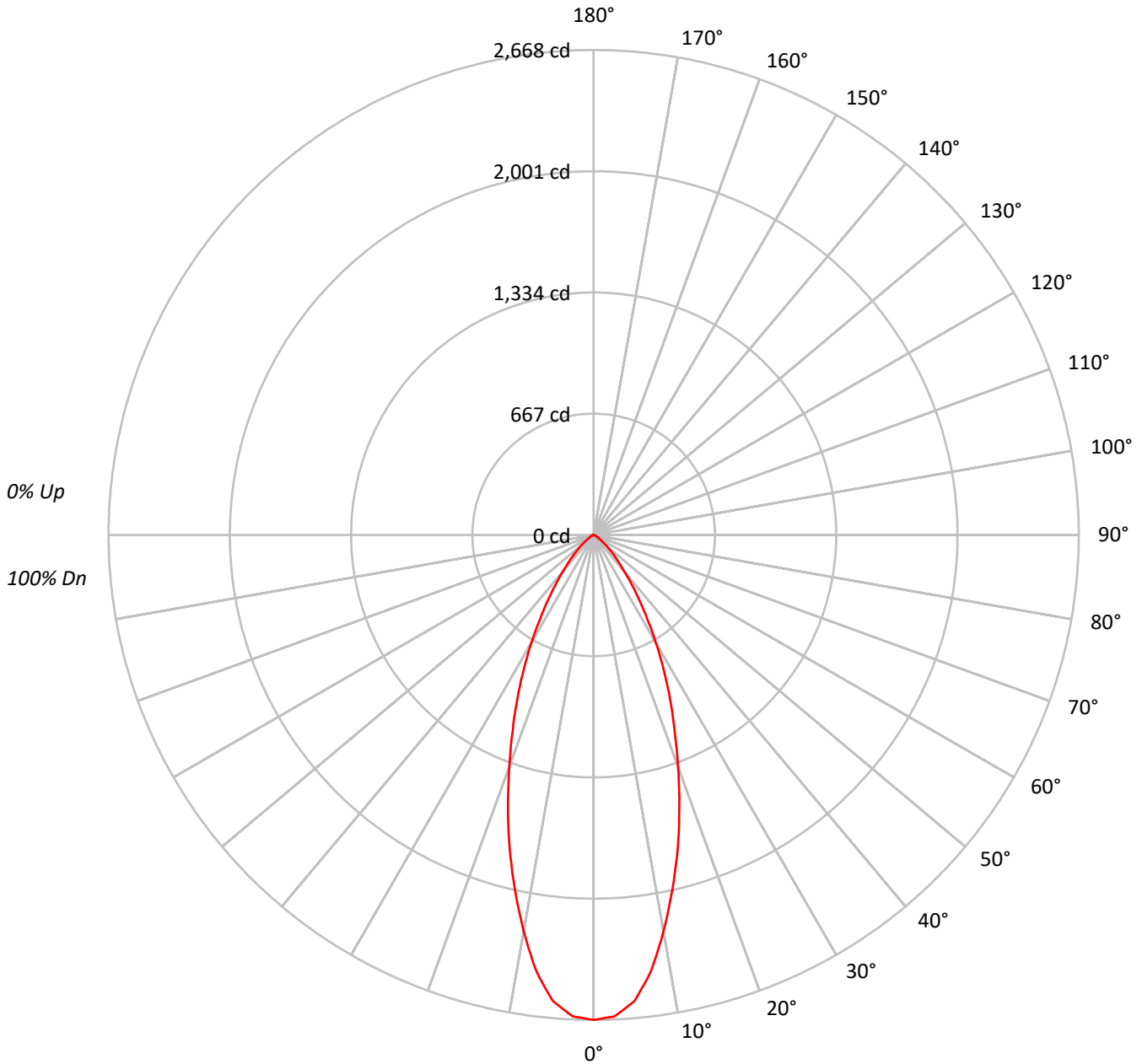
Lumens per Lamp: N/A  
Luminaire Lumens: 1645.5 lumens  
Efficiency: N/A  
Efficacy: 122.8 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

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

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

	0°
0°	210599
5°	203994
10°	177536
15°	145864
20°	113805
25°	86431
30°	62267
35°	41998
40°	27123
45°	17505
50°	10242
55°	5739
60°	3852
65°	2690
70°	1985
75°	1769
80°	636
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 17505 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	233.9	14.2
10°-20°	493.2	30.0
20°-30°	454.2	27.6
30°-40°	277.7	16.9
40°-50°	124.1	7.5
50°-60°	40.9	2.5
60°-70°	15.4	0.9
70°-80°	5.5	0.3
80°-90°	0.6	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°	1181.2	71.8
0°-40°	1458.9	88.7
0°-60°	1624.0	98.7
0°-90°	1645.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1645.5	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2668	
5°	2574	234
15°	1785	493
25°	992	454
35°	436	278
45°	157	124
55°	42	41
65°	14	15
75°	6	5
85°	0	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	2667.8
2.5°	2650.5
5°	2574.3
7.5°	2420.4
10°	2214.8
12.5°	1999.0
15°	1784.8
17.5°	1566.2
20°	1354.7
22.5°	1162.0
25°	992.3
27.5°	829.8
30°	683.1
32.5°	549.4
35°	435.8
37.5°	342.3
40°	263.2
42.5°	204.2
45°	156.8
47.5°	116.5
50°	83.4
52.5°	59.0
55°	41.7
57.5°	30.2
60°	24.4
62.5°	20.1
65°	14.4
67.5°	11.5
70°	8.6
72.5°	7.2
75°	5.8
77.5°	2.9
80°	1.4
82.5°	1.4
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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(END OF REPORT)