

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: P642694

Luminaire Tested: ML5615LSFL409FS1E - 696WB - 1500LM - 4000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642694  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-46)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 696WB - 1500LM - 4000K  
Description: ML56 RR, 40D TIR OPTIC, 6" SHALLOW WHITE BAFFLE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2039.9 lumens  
Efficiency: N/A  
Efficacy: 119.3 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

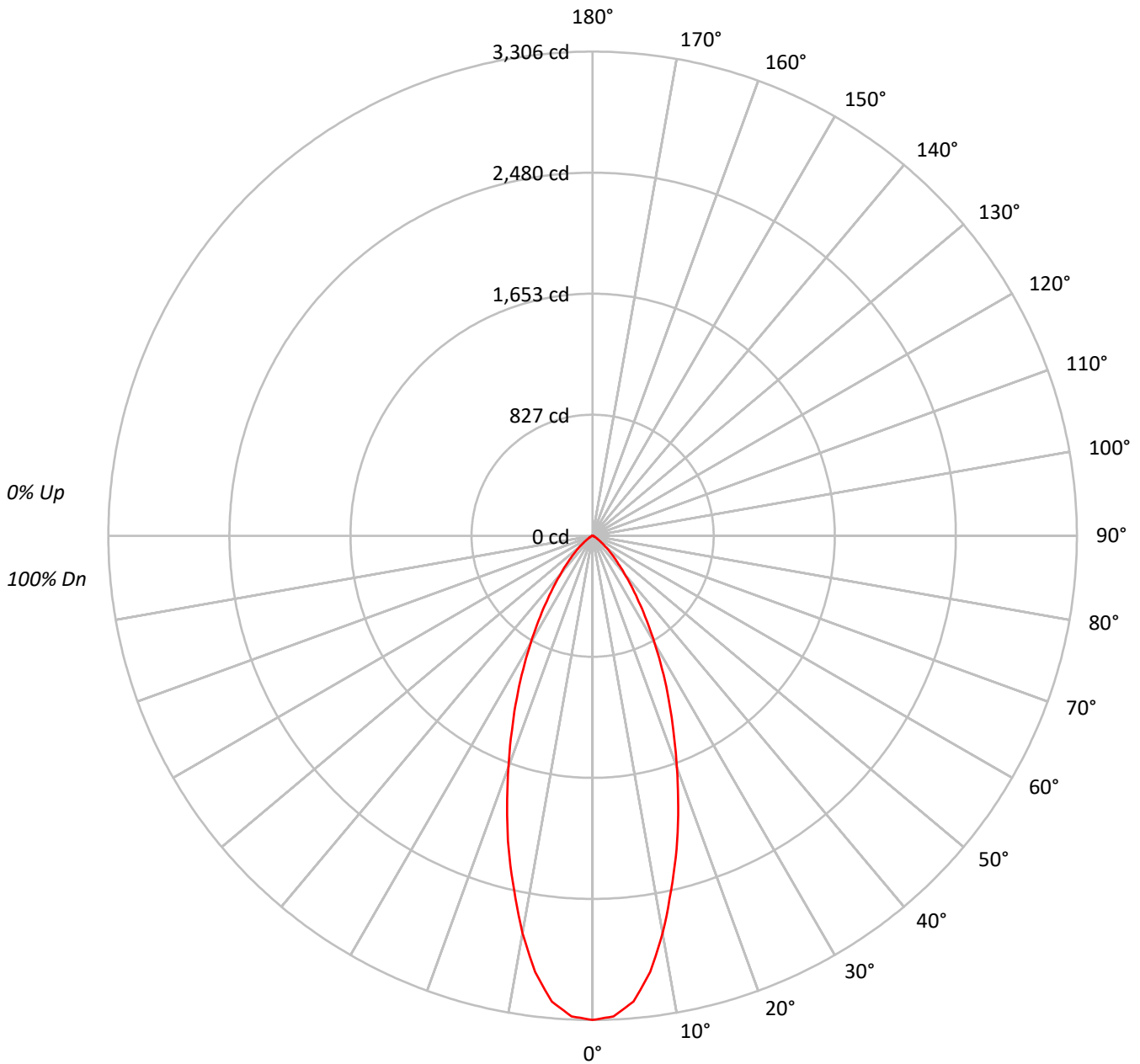
Input Watts (W): 17.1  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
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				100															
1	114	111	108	106	111	109	106	104	105	103	101	101	100	98	97	96	95	94				94															
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87				87															
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81				81															
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76				76															
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71				71															
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	66				66															
7	84	75	69	65	83	74	69	65	73	68	65	72	68	64	71	67	64	63				63															
8	80	71	65	61	79	70	65	61	69	64	61	68	64	61	67	63	60	59				59															
9	77	67	62	58	76	67	61	58	66	61	57	65	60	57	64	60	57	56				56															
10	73	64	58	55	72	64	58	55	63	58	54	62	57	54	61	57	54	53				53															

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

	0°
0°	181219
5°	175687
10°	153332
15°	125744
20°	98020
25°	74170
30°	53458
35°	36654
40°	24024
45°	15614
50°	9194
55°	5066
60°	2905
65°	1608
70°	850
75°	381
80°	568
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15614 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	290.3	14.2
10°-20°	611.6	30.0
20°-30°	562.1	27.6
30°-40°	348.1	17.1
40°-50°	159.2	7.8
50°-60°	51.6	2.5
60°-70°	13.5	0.7
70°-80°	2.8	0.1
80°-90°	0.7	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°	1464.0	71.8
0°-40°	1812.1	88.8
0°-60°	2023.0	99.2
0°-90°	2039.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2039.9	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	3306	
5°	3193	290
15°	2216	612
25°	1226	562
35°	548	348
45°	201	159
55°	53	52
65°	12	13
75°	2	3
85°	0	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	3305.7
2.5°	3284.5
5°	3192.6
7.5°	3003.6
10°	2754.5
12.5°	2475.3
15°	2215.6
17.5°	1940.0
20°	1680.2
22.5°	1440.0
25°	1226.2
27.5°	1026.5
30°	844.5
32.5°	685.5
35°	547.7
37.5°	432.9
40°	335.7
42.5°	261.5
45°	201.4
47.5°	150.2
50°	107.8
52.5°	76.0
55°	53.0
57.5°	37.1
60°	26.5
62.5°	19.4
65°	12.4
67.5°	7.1
70°	5.3
72.5°	3.5
75°	1.8
77.5°	1.8
80°	1.8
82.5°	1.8
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)