

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: P642612

Luminaire Tested: ML5615LSFL409FS1E - 693SNB - 1200LM - 3000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642612  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-42)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 693SNB - 1200LM - 3000K  
Description: ML56 RR, 40D TIR OPTIC, 6" SATIN NICKLE BAFFLE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1480.4 lumens  
Efficiency: N/A  
Efficacy: 110.5 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.7  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

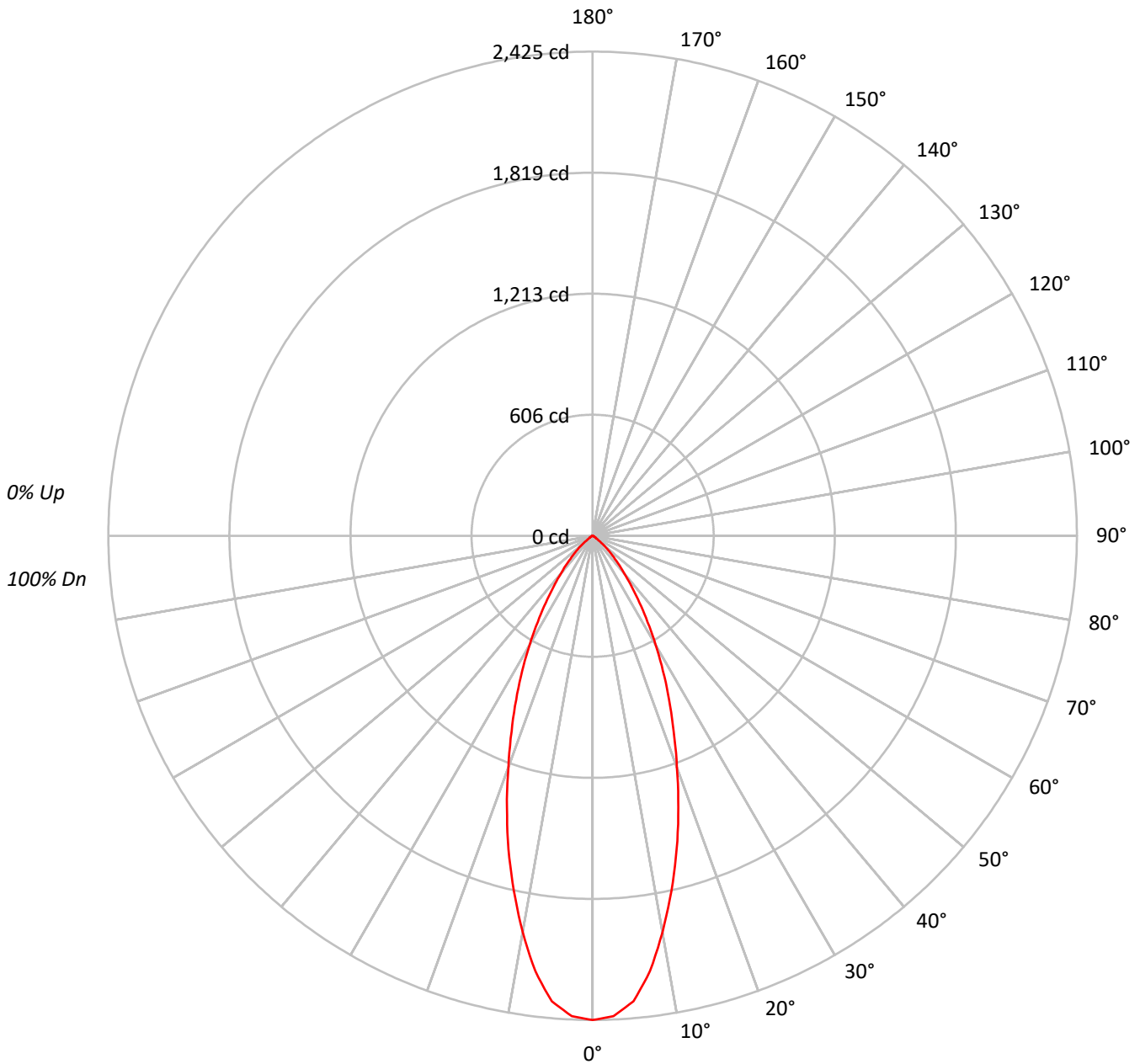
Input Watts (W): 13.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P642612

CATALOG NUMBER: ML5615LSFL409FS1E - 693SNB - 1200LM - 3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P642612

CATALOG NUMBER: ML5615LSFL409FS1E - 693SNB - 1200LM - 3000K

**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	109	106	111	109	107	105	105	103	101	101	100	98	98	97	96	94																			
2	108	104	100	96	106	102	98	95	99	96	93	96	93	91	93	91	89	88																			
3	103	97	92	88	101	95	91	87	93	89	86	90	87	85	88	86	83	82																			
4	98	91	85	81	96	90	85	81	87	83	80	85	82	79	84	80	78	76																			
5	93	85	80	75	92	84	79	75	82	78	74	81	77	74	79	76	73	72																			
6	89	80	74	70	87	79	74	70	78	73	70	77	72	69	75	72	69	67																			
7	85	76	70	66	83	75	70	66	74	69	65	73	68	65	72	68	65	63																			
8	81	72	66	62	80	71	66	62	70	65	62	69	65	61	68	64	61	60																			
9	77	68	62	58	76	67	62	58	67	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°	132955
5°	128808
10°	112178
15°	92282
20°	71995
25°	54808
30°	39886
35°	27358
40°	17697
45°	10900
50°	5885
55°	2236
60°	1425
65°	506
70°	0
75°	0
80°	0
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10900 cd/sqm



TEST NUMBER: P642612

CATALOG NUMBER: ML5615LSFL409FS1E - 693SNB - 1200LM - 3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	212.7	14.4
10°-20°	449.2	30.3
20°-30°	415.5	28.1
30°-40°	259.1	17.5
40°-50°	113.2	7.6
50°-60°	26.0	1.8
60°-70°	4.8	0.3
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°	1077.4	72.8
0°-40°	1336.5	90.3
0°-60°	1475.6	99.7
0°-90°	1480.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1480.4	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2425	
5°	2341	213
15°	1626	449
25°	906	415
35°	409	259
45°	141	113
55°	23	26
65°	4	5
75°	0	0
85°	0	0
90°	0	



TEST NUMBER: P642612

CATALOG NUMBER: ML5615LSFL409FS1E - 693SNB - 1200LM - 3000K

**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2425.3
2.5°	2408.4
5°	2340.7
7.5°	2200.1
10°	2015.2
12.5°	1821.3
15°	1626.0
17.5°	1426.8
20°	1234.1
22.5°	1059.7
25°	906.1
27.5°	762.9
30°	630.1
32.5°	511.6
35°	408.8
37.5°	320.3
40°	247.3
42.5°	191.4
45°	140.6
47.5°	104.1
50°	69.0
52.5°	35.1
55°	23.4
57.5°	18.2
60°	13.0
62.5°	7.8
65°	3.9
67.5°	1.3
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

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report





Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



— 0°-180°

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)