

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: P642414

Luminaire Tested: ML5615LSFL409FS1E - 592W - 900LM - 4000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P642414  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-27)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5615LSFL409FS1E - 592W - 900LM - 4000K  
Description: ML56 RR, 40D TIR OPTIC, 5" WHITE TRIM  
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1292.5 lumens  
Efficiency: N/A  
Efficacy: 123.1 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

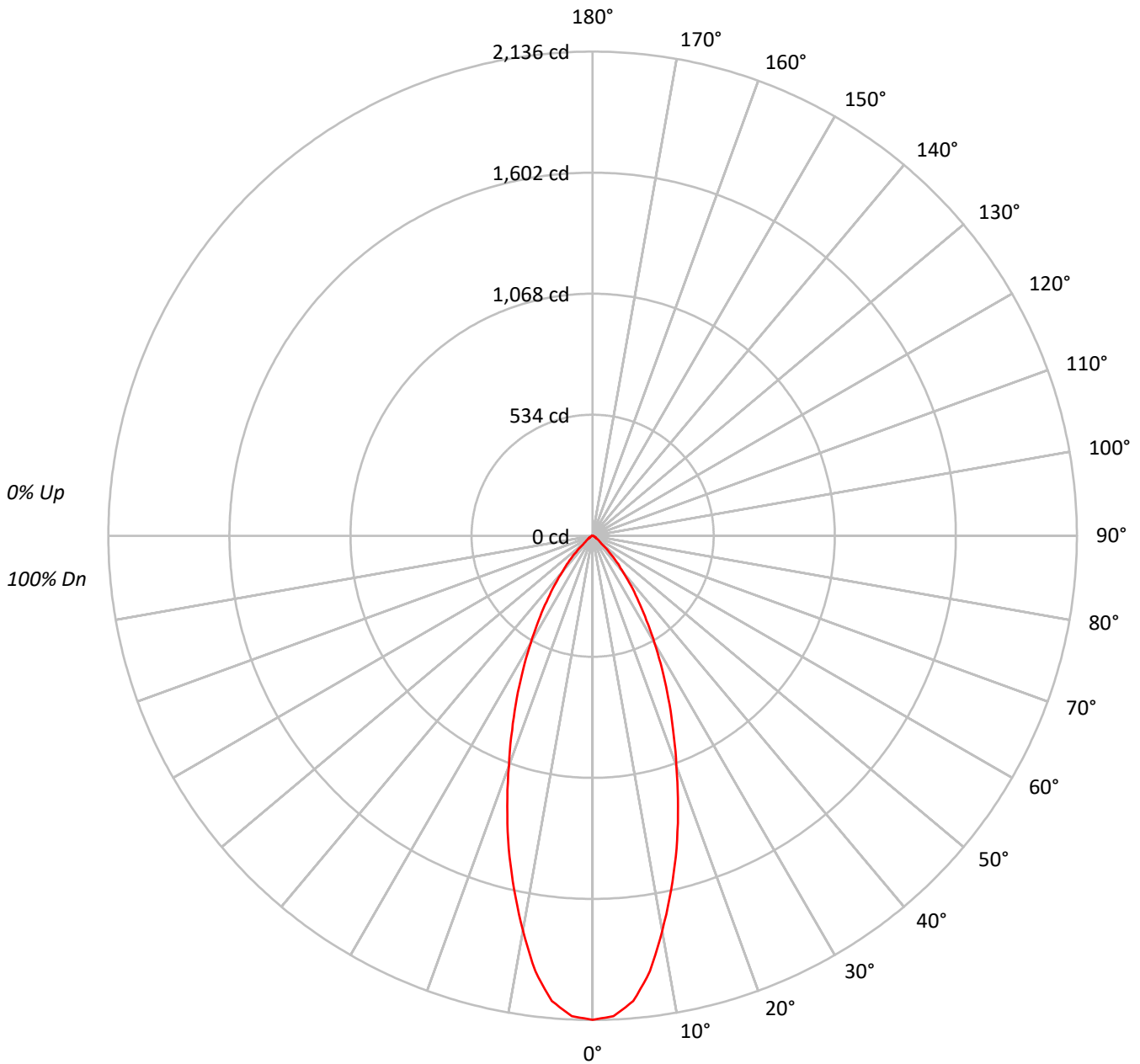
Input Watts (W): 10.5  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P642414

CATALOG NUMBER: ML5615LSFL409FS1E - 592W - 900LM - 4000K

### Luminous Intensity Polar Plot





TEST NUMBER: P642414

CATALOG NUMBER: ML5615LSFL409FS1E - 592W - 900LM - 4000K

**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	100	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	97	92	88	101	95	91	87	93	89	86	90	87	84	88	85	83	81																			
4	98	90	85	81	96	89	84	80	87	83	80	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	68	65	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	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	54																			

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

	0°
0°	168578
5°	163271
10°	141825
15°	116810
20°	90745
25°	68836
30°	49751
35°	34076
40°	21445
45°	12571
50°	5023
55°	3289
60°	2337
65°	1494
70°	1316
75°	1373
80°	1546
85°	996

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12571 cd/sqm



TEST NUMBER: P642414

CATALOG NUMBER: ML5615LSFL409FS1E - 592W - 900LM - 4000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	187.2	14.5
10°-20°	394.3	30.5
20°-30°	362.3	28.0
30°-40°	223.7	17.3
40°-50°	87.4	6.8
50°-60°	22.6	1.7
60°-70°	9.0	0.7
70°-80°	4.5	0.3
80°-90°	1.7	0.1
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°	943.7	73.0
0°-40°	1167.4	90.3
0°-60°	1277.4	98.8
0°-90°	1292.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1292.5	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2136	
5°	2060	187
15°	1429	394
25°	790	362
35°	354	224
45°	113	87
55°	24	23
65°	8	9
75°	4	4
85°	1	2
90°	0	



TEST NUMBER: P642414

CATALOG NUMBER: ML5615LSFL409FS1E - 592W - 900LM - 4000K

**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2135.5
2.5°	2120.7
5°	2060.4
7.5°	1937.6
10°	1769.3
12.5°	1598.8
15°	1429.3
17.5°	1251.9
20°	1080.2
22.5°	927.9
25°	790.3
27.5°	661.8
30°	545.8
32.5°	442.3
35°	353.6
37.5°	277.5
40°	208.1
42.5°	159.2
45°	112.6
47.5°	64.8
50°	40.9
52.5°	31.8
55°	23.9
57.5°	18.2
60°	14.8
62.5°	12.5
65°	8.0
67.5°	5.7
70°	5.7
72.5°	4.5
75°	4.5
77.5°	3.4
80°	3.4
82.5°	2.3
85°	1.1
87.5°	1.1
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)