

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: P640370

Luminaire Tested: ML5609LSNFL25D2W1E - 691WB - 900LM - 3000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P640370  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-13)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5609LSNFL25D2W1E - 691WB - 900LM - 3000K  
Description: ML56 RR, 25D TIR OPTIC, 6" DEADFRONT TRIM  
Light Source: (1) D2W SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

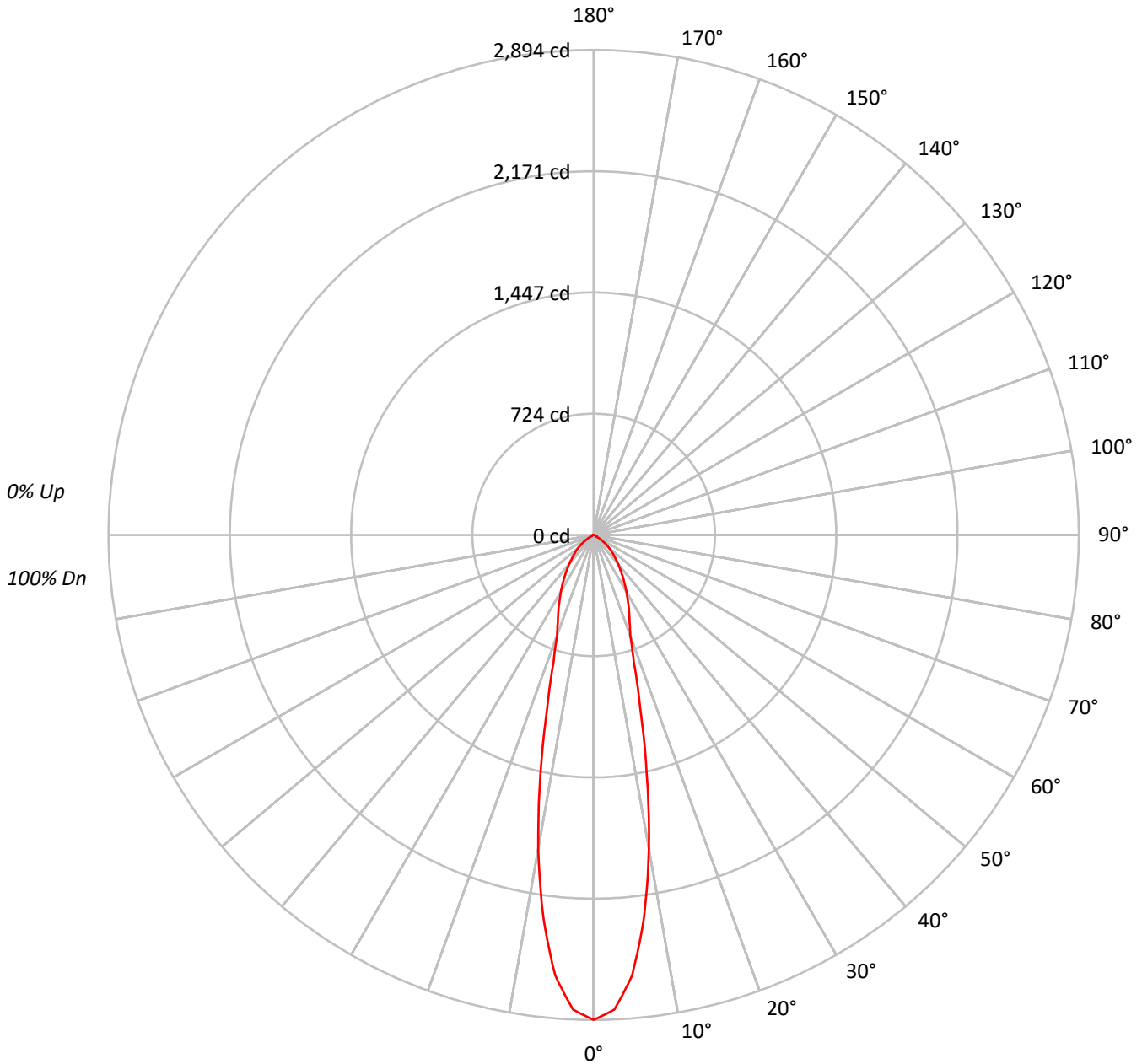
Lumens per Lamp: N/A  
Luminaire Lumens: 1169.5 lumens  
Efficiency: N/A  
Efficacy: 99.1 lumens/watt  
Spacing Criteria (0/90/45): 0.43 / 0.43 / 0.44  
Luminous Opening: Circular (Dia: 0.5' x H: 0')  
CIE Type: Direct

Input Watts (W): 11.8  
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: P640370  
CATALOG NUMBER: ML5609LSNFL25D2W1E - 691WB - 900LM - 3000K

### Luminous Intensity Polar Plot





TEST NUMBER: P640370

CATALOG NUMBER: ML5609LSNFL25D2W1E - 691WB - 900LM - 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	113	110	108	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93																			
2	107	102	98	95	105	101	97	94	97	94	91	94	92	90	92	89	88	86																			
3	102	95	90	86	100	94	89	85	91	87	84	89	85	83	86	84	81	80																			
4	97	89	83	79	95	88	82	78	86	81	77	84	80	77	82	78	76	74																			
5	92	83	77	73	90	82	77	73	81	76	72	79	75	71	77	74	71	69																			
6	87	78	72	68	86	78	72	68	76	71	67	75	70	67	73	69	66	65																			
7	83	74	68	64	82	73	68	64	72	67	63	71	66	63	70	66	63	61																			
8	80	70	64	60	78	70	64	60	68	63	60	67	63	59	66	62	59	58																			
9	76	67	61	57	75	66	61	57	65	60	57	64	60	56	63	59	56	55																			
10	73	63	58	54	72	63	58	54	62	57	54	61	57	54	61	57	53	52																			

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

	0°
0°	158639
5°	145185
10°	105771
15°	60801
20°	37220
25°	30117
30°	24694
35°	20124
40°	16195
45°	12955
50°	10200
55°	6595
60°	2598
65°	1959
70°	1555
75°	1377
80°	1357
85°	1384

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12955 cd/sqm



TEST NUMBER: P640370

CATALOG NUMBER: ML5609LSNFL25D2W1E - 691WB - 900LM - 3000K

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	227.5	19.5
10°-20°	307.2	26.3
20°-30°	229.4	19.6
30°-40°	188.6	16.1
40°-50°	130.0	11.1
50°-60°	62.4	5.3
60°-70°	15.0	1.3
70°-80°	7.0	0.6
80°-90°	2.4	0.2
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°	764.1	65.3
0°-40°	952.7	81.5
0°-60°	1145.1	97.9
0°-90°	1169.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1169.5	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2894	
5°	2638	228
15°	1071	307
25°	498	229
35°	301	189
45°	167	130
55°	69	62
65°	15	15
75°	6	7
85°	2	2
90°	0	



TEST NUMBER: P640370

CATALOG NUMBER: ML5609LSNFL25D2W1E - 691WB - 900LM - 3000K

**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2893.8
2.5°	2835.6
5°	2638.3
7.5°	2301.0
10°	1900.1
12.5°	1464.7
15°	1071.3
17.5°	793.2
20°	638.0
22.5°	557.2
25°	497.9
27.5°	441.9
30°	390.1
32.5°	342.7
35°	300.7
37.5°	261.9
40°	226.3
42.5°	195.1
45°	167.1
47.5°	142.3
50°	119.6
52.5°	97.0
55°	69.0
57.5°	44.2
60°	23.7
62.5°	17.2
65°	15.1
67.5°	11.9
70°	9.7
72.5°	7.5
75°	6.5
77.5°	5.4
80°	4.3
82.5°	3.2
85°	2.2
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)