

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: P640346

Luminaire Tested: ML5609LSNFL25D2W1E - 591WB - 900LM - 3000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P640346  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-1)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5609LSNFL25D2W1E - 591WB - 900LM - 3000K  
Description: ML56 RR, 25D TIR OPTIC, 5" DEADFRONT TRIM  
Light Source: (1) D2W SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

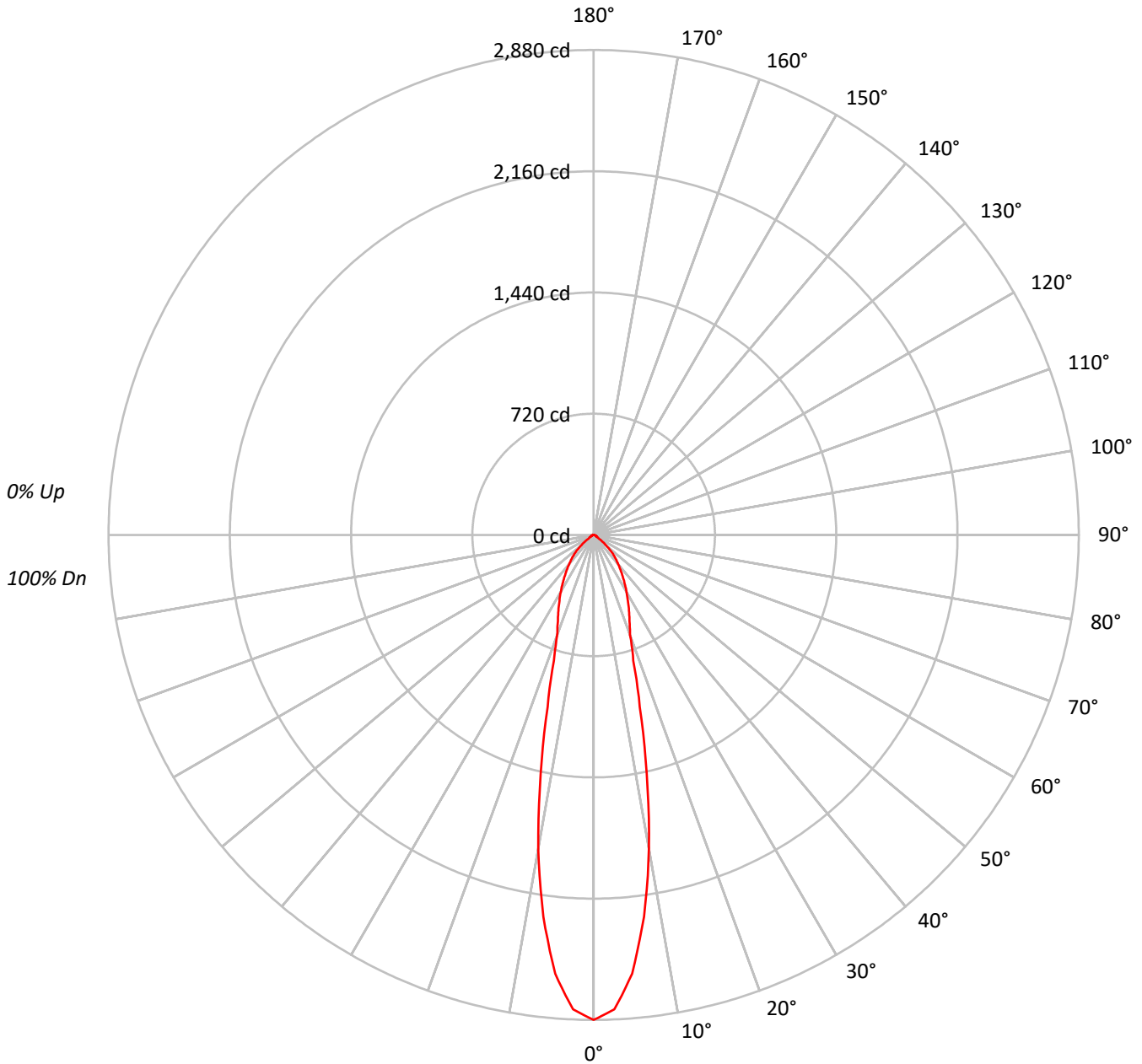
Lumens per Lamp: N/A  
Luminaire Lumens: 1144.6 lumens  
Efficiency: N/A  
Efficacy: 97.0 lumens/watt  
Spacing Criteria (0/90/45): 0.43 / 0.43 / 0.44  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

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



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### Luminous Intensity Polar Plot





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

RF	20				20				20				20				20				
RC	80				70				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	100	100
1	113	110	108	105	111	108	106	104	104	102	101	100	99	98	97	96	95	93	93	93	93
2	107	102	98	95	105	101	97	94	97	94	92	94	92	90	92	90	88	86	86	86	86
3	102	95	90	86	100	94	89	86	91	87	84	89	86	83	87	84	82	80	80	80	80
4	97	89	84	79	95	88	83	79	86	81	78	84	80	77	82	79	76	75	75	75	75
5	92	84	78	74	90	83	77	73	81	76	73	79	75	72	78	74	71	70	70	70	70
6	88	79	73	69	86	78	72	68	77	72	68	75	71	67	74	70	67	66	66	66	66
7	84	75	69	64	82	74	68	64	73	68	64	71	67	64	70	66	63	62	62	62	62
8	80	71	65	61	79	70	64	61	69	64	60	68	63	60	67	63	60	58	58	58	58
9	77	67	61	58	76	67	61	57	66	61	57	65	60	57	64	60	57	56	56	56	56
10	73	64	58	55	72	64	58	55	63	58	54	62	58	54	61	57	54	53	53	53	53

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

	0°
0°	227342
5°	207282
10°	151684
15°	86359
20°	53168
25°	43202
30°	35577
35°	28882
40°	23331
45°	18655
50°	12183
55°	5340
60°	3410
65°	3026
70°	2747
75°	2623
80°	2955
85°	2898

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 18655 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	226.1	19.8
10°-20°	304.2	26.6
20°-30°	228.4	20.0
30°-40°	188.3	16.5
40°-50°	125.6	11.0
50°-60°	42.6	3.7
60°-70°	16.4	1.4
70°-80°	9.2	0.8
80°-90°	3.8	0.3
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°	758.7	66.3
0°-40°	947.0	82.7
0°-60°	1115.2	97.4
0°-90°	1144.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1144.6	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2880	
5°	2616	226
15°	1057	304
25°	496	228
35°	300	188
45°	167	126
55°	39	43
65°	16	16
75°	9	9
85°	3	4
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2879.9
2.5°	2820.6
5°	2615.8
7.5°	2286.9
10°	1892.3
12.5°	1452.4
15°	1056.7
17.5°	783.9
20°	632.9
22.5°	554.2
25°	496.0
27.5°	439.9
30°	390.3
32.5°	342.9
35°	299.7
37.5°	260.9
40°	226.4
42.5°	195.2
45°	167.1
47.5°	130.5
50°	99.2
52.5°	67.9
55°	38.8
57.5°	25.9
60°	21.6
62.5°	19.4
65°	16.2
67.5°	14.0
70°	11.9
72.5°	9.7
75°	8.6
77.5°	7.5
80°	6.5
82.5°	5.4
85°	3.2
87.5°	2.2
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)