

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: P640381

Luminaire Tested: ML5609LSNFL25D2W1E - 693TBZB - 900LM - 2700K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P640381  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-20)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5609LSNFL25D2W1E - 693TBZB - 900LM - 2700K  
Description: ML56 RR, 25D TIR OPTIC, 6" TUSCON BRONZE BAFFLE TRIM  
Light Source: (1) D2W SELECTABLE LUMEN LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1015.2 lumens  
Efficiency: N/A  
Efficacy: 86.0 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

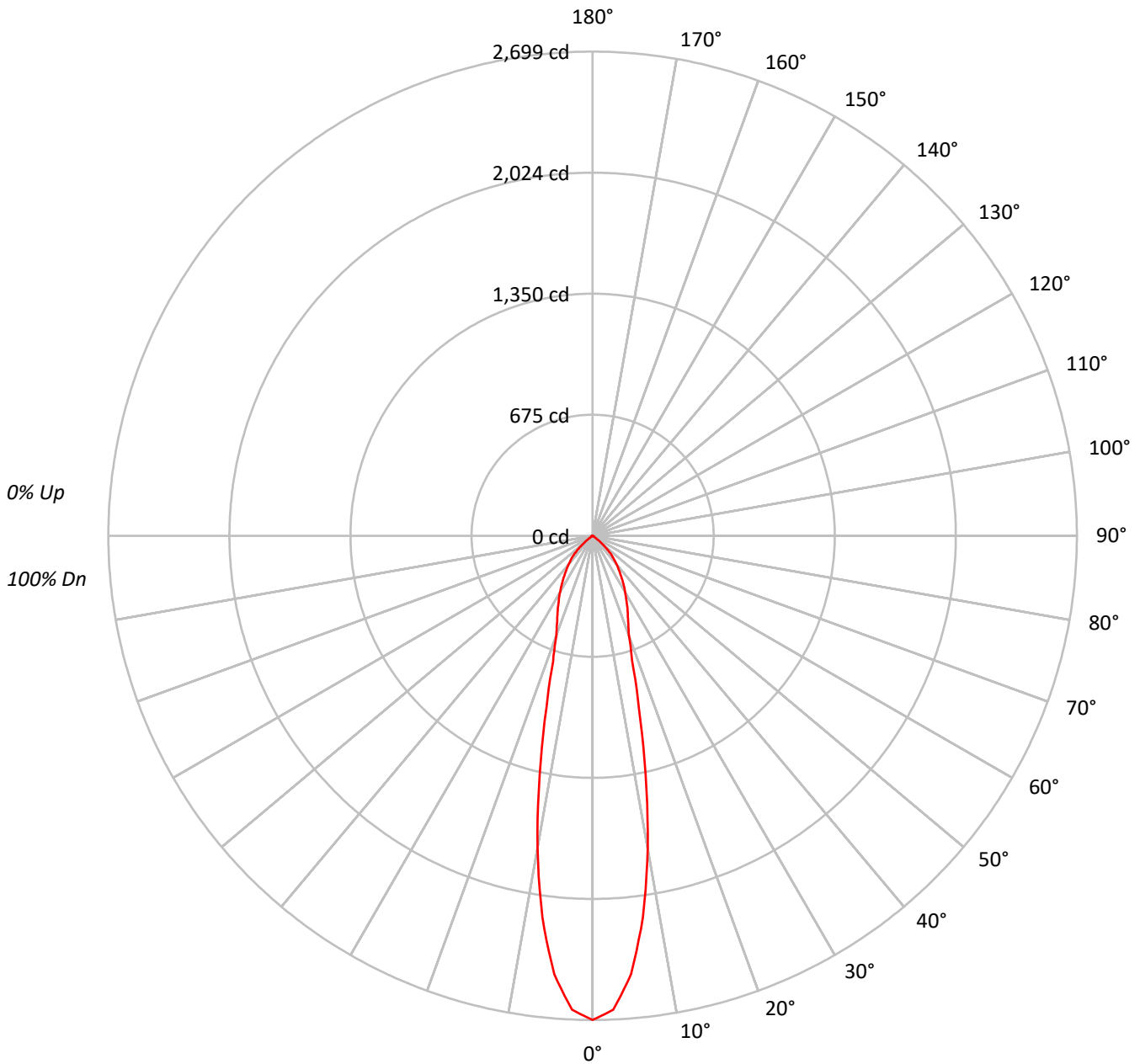
Input Watts (W): 11.8  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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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			
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94			
2	108	104	100	97	106	102	99	96	99	96	93	96	94	91	93	91	90	88			
3	103	97	92	89	101	96	91	88	93	89	86	91	88	85	89	86	84	82			
4	98	91	86	82	97	90	85	81	88	84	80	86	82	79	84	81	79	77			
5	94	86	80	76	92	85	80	76	83	79	75	82	78	75	80	77	74	72			
6	90	81	75	71	88	80	75	71	79	74	71	77	73	70	76	73	70	68			
7	86	77	71	67	84	76	71	67	75	70	67	74	69	66	73	69	66	65			
8	82	73	67	63	81	72	67	63	71	66	63	70	66	63	69	65	63	61			
9	78	69	64	60	77	69	64	60	68	63	60	67	63	60	66	62	59	58			
10	75	66	61	57	74	66	61	57	65	60	57	64	60	57	64	60	57	56			

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

	0°
0°	147954
5°	134982
10°	98517
15°	56379
20°	34396
25°	27885
30°	22953
35°	18618
40°	14735
45°	11288
50°	5740
55°	1443
60°	877
65°	389
70°	160
75°	0
80°	0
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11288 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	211.9	20.9
10°-20°	284.9	28.1
20°-30°	212.4	20.9
30°-40°	174.4	17.2
40°-50°	107.4	10.6
50°-60°	20.4	2.0
60°-70°	3.3	0.3
70°-80°	0.4	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°	709.2	69.9
0°-40°	883.7	87.0
0°-60°	1011.5	99.6
0°-90°	1015.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1015.2	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2699	
5°	2453	212
15°	993	285
25°	461	212
35°	278	174
45°	146	107
55°	15	20
65°	3	3
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2698.9
2.5°	2644.7
5°	2452.9
7.5°	2145.5
10°	1769.8
12.5°	1361.0
15°	993.4
17.5°	733.2
20°	589.6
22.5°	515.3
25°	461.0
27.5°	408.8
30°	362.6
32.5°	319.4
35°	278.2
37.5°	241.1
40°	205.9
42.5°	175.8
45°	145.6
47.5°	104.5
50°	67.3
52.5°	30.1
55°	15.1
57.5°	10.0
60°	8.0
62.5°	5.0
65°	3.0
67.5°	1.0
70°	1.0
72.5°	1.0
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

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— 0°-180°

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(END OF REPORT)