

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: P640302

Luminaire Tested: ML5609LSFL40D2W1E - 592H - 900LM - 3000K

Issue Date: 2/17/2023

**Test Information**

Test Method: LM-79-2019  
Report Number: P640302  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-26)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 2/17/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML5609LSFL40D2W1E - 592H - 900LM - 3000K  
Description: ML56 RR, 40D TIR OPTIC, 5" HAZE TRIM  
Light Source: (1) D2W SELECTABLE LUMEN LED 90CRI / 3000K CCT  
Ballast/Driver: -

**Summary**

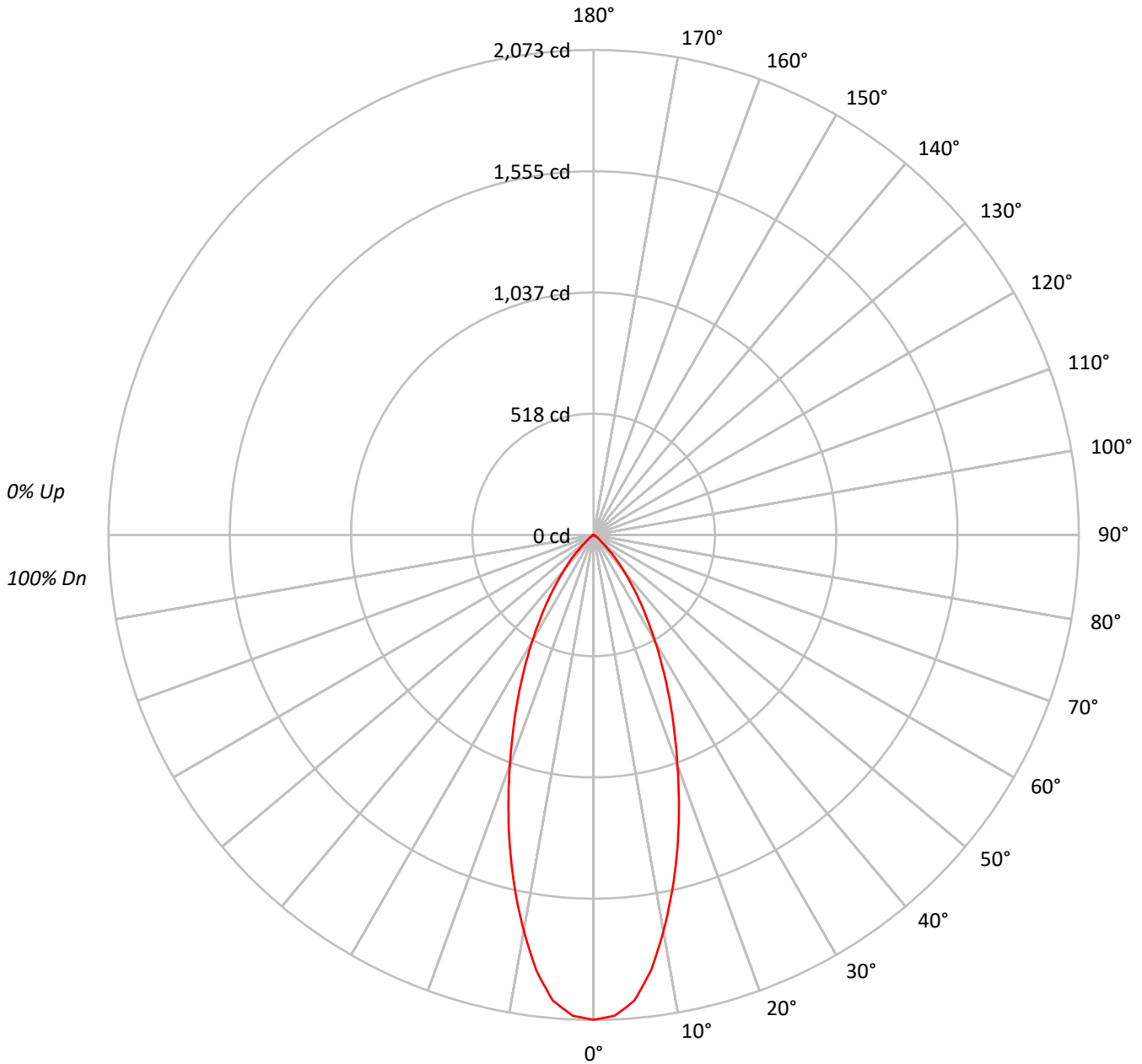
Lumens per Lamp: N/A  
Luminaire Lumens: 1224.4 lumens  
Efficiency: N/A  
Efficacy: 103.8 lumens/watt  
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69  
Luminous Opening: Circular (Dia: 0.42' x H: 0')  
CIE Type: Direct

Input Watts (W): 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	94	96	94	92	93	91	90	88			
3	103	97	92	89	101	96	91	88	93	90	87	91	88	85	89	86	84	82			
4	98	91	86	82	97	90	85	81	88	84	80	86	82	80	84	81	79	77			
5	94	86	80	76	92	85	80	76	83	79	75	82	78	75	80	77	74	72			
6	89	81	75	71	88	80	75	71	79	74	70	77	73	70	76	72	70	68			
7	85	77	71	67	84	76	70	67	75	70	66	73	69	66	72	69	66	64			
8	82	72	67	63	80	72	67	63	71	66	63	70	65	62	69	65	62	61			
9	78	69	63	59	77	68	63	59	67	63	59	67	62	59	66	62	59	57			
10	75	65	60	56	74	65	60	56	64	59	56	63	59	56	63	59	56	55			

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

	0°
0°	163621
5°	158350
10°	137801
15°	113018
20°	87829
25°	66371
30°	47746
35°	32515
40°	20218
45°	11075
50°	4102
55°	2367
60°	1358
65°	411
70°	0
75°	0
80°	0
85°	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11075 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	181.5	14.8
10°-20°	382.1	31.2
20°-30°	349.3	28.5
30°-40°	213.2	17.4
40°-50°	78.8	6.4
50°-60°	16.6	1.4
60°-70°	2.9	0.2
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°	912.9	74.6
0°-40°	1126.1	92.0
0°-60°	1221.5	99.8
0°-90°	1224.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1224.4	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	2073	
5°	1998	182
15°	1383	382
25°	762	349
35°	337	213
45°	99	79
55°	17	17
65°	2	3
75°	0	0
85°	0	0
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°
0°	2072.7
2.5°	2057.6
5°	1998.3
7.5°	1877.6
10°	1719.1
12.5°	1553.2
15°	1382.9
17.5°	1211.5
20°	1045.5
22.5°	895.7
25°	762.0
27.5°	637.0
30°	523.8
32.5°	423.6
35°	337.4
37.5°	261.9
40°	196.2
42.5°	148.7
45°	99.2
47.5°	53.9
50°	33.4
52.5°	24.8
55°	17.2
57.5°	11.9
60°	8.6
62.5°	5.4
65°	2.2
67.5°	0.0
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

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— 0°-180°

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(END OF REPORT)