

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: P640323

Luminaire Tested: ML5609LSFL40D2W1E - 691WB - 900LM - 2700K

Issue Date: 2/17/2023

Test Information

Test Method: LM-79-2019
Report Number: P640323
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2212-866-36)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 2/17/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML5609LSFL40D2W1E - 691WB - 900LM - 2700K
Description: ML56 RR, 40D TIR OPTIC, 6" DEADFRONT TRIM
Light Source: (1) D2W SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

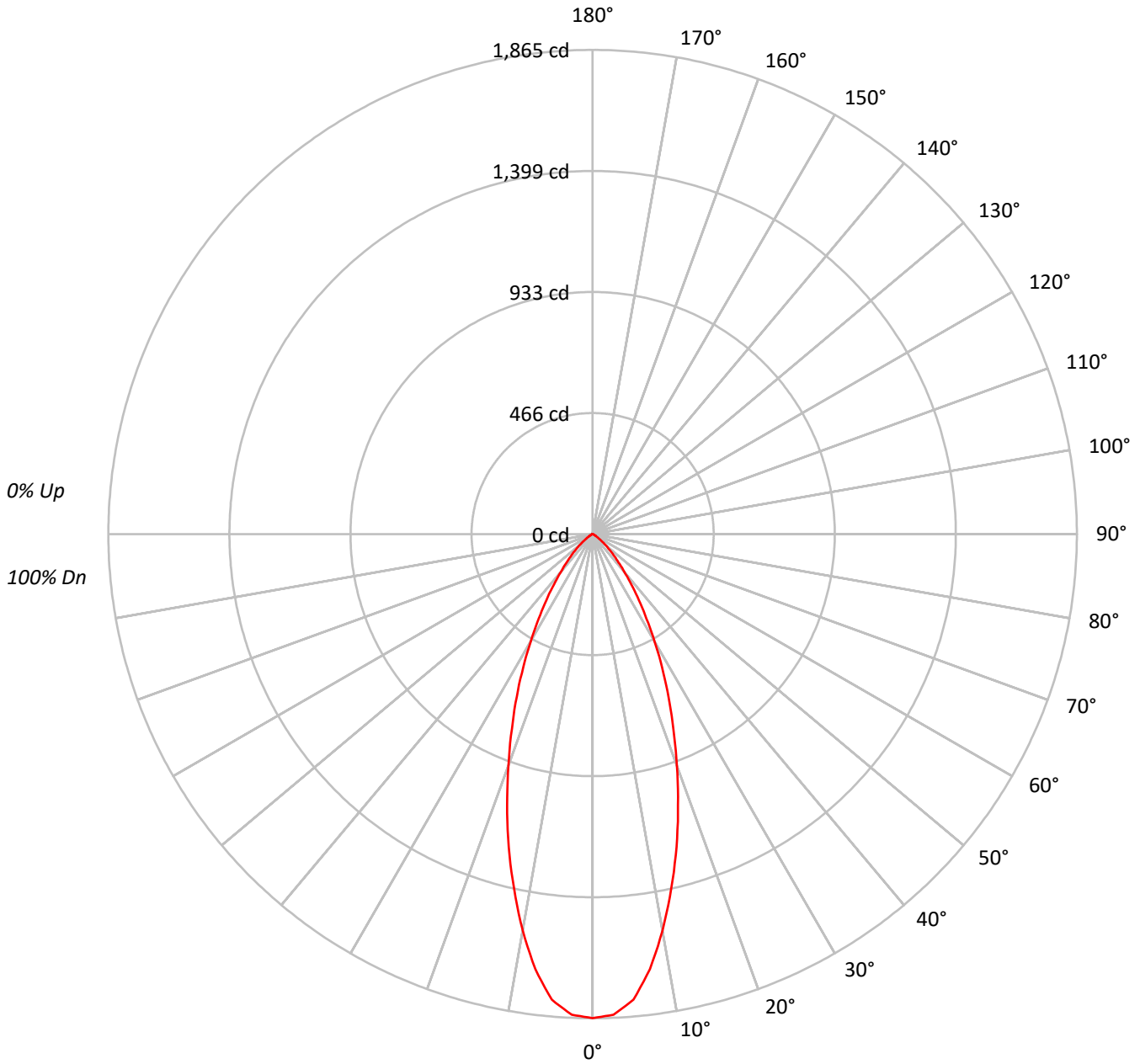
Lumens per Lamp: N/A
Luminaire Lumens: 1149.8 lumens
Efficiency: N/A
Efficacy: 97.4 lumens/watt
Spacing Criteria (0/90/45): 0.64 / 0.64 / 0.69
Luminous Opening: Circular (Dia: 0.5' x H: 0')
CIE Type: Direct

Input Watts (W): 11.8
Input Voltage (V): NR
Input Current (A_{in}): 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	108	106	111	109	106	104	105	103	101	101	99	98	97	96	95	94			
2	108	103	99	96	106	101	98	95	98	95	93	95	93	91	93	91	89	87			
3	103	96	91	87	101	95	90	87	92	89	85	90	87	84	88	85	83	81			
4	98	90	85	81	96	89	84	80	87	83	79	85	81	78	83	80	77	76			
5	93	85	79	75	91	84	78	74	82	77	74	80	76	73	79	75	72	71			
6	88	80	74	70	87	79	73	69	77	72	69	76	72	68	75	71	68	67			
7	84	75	69	65	83	74	69	65	73	68	65	72	68	64	71	67	64	63			
8	80	71	65	61	79	70	65	61	69	64	61	68	64	61	67	63	60	59			
9	77	67	62	58	76	67	61	58	66	61	57	65	61	57	64	60	57	56			
10	73	64	58	55	72	64	58	55	63	58	54	62	57	54	61	57	54	53			

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	102223
5°	99081
10°	86315
15°	70801
20°	55270
25°	41827
30°	30176
35°	20753
40°	13575
45°	8869
50°	5219
55°	2781
60°	1546
65°	908
70°	481
75°	212
80°	316
85°	629

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8869 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.5	14.2
10°-20°	344.9	30.0
20°-30°	316.9	27.6
30°-40°	196.7	17.1
40°-50°	90.0	7.8
50°-60°	28.3	2.5
60°-70°	7.3	0.6
70°-80°	1.6	0.1
80°-90°	0.7	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°	825.3	71.8
0°-40°	1022.0	88.9
0°-60°	1140.2	99.2
0°-90°	1149.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1149.8	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	1865	
5°	1800	164
15°	1248	345
25°	692	317
35°	310	197
45°	114	90
55°	29	28
65°	7	7
75°	1	2
85°	1	1
90°	0	



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CANDELA DISTRIBUTION (FULL):

	0°
0°	1864.7
2.5°	1852.7
5°	1800.5
7.5°	1690.1
10°	1550.6
12.5°	1399.1
15°	1247.5
17.5°	1094.0
20°	947.4
22.5°	811.9
25°	691.5
27.5°	578.1
30°	476.7
32.5°	386.4
35°	310.1
37.5°	244.9
40°	189.7
42.5°	147.5
45°	114.4
47.5°	84.3
50°	61.2
52.5°	42.2
55°	29.1
57.5°	19.1
60°	14.1
62.5°	10.0
65°	7.0
67.5°	4.0
70°	3.0
72.5°	2.0
75°	1.0
77.5°	1.0
80°	1.0
82.5°	1.0
85°	1.0
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)