

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: P886741

Luminaire Tested: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-5000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886741
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-17)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/8/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D40FL-TL3SDSL-1000LM-5000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, METALLIC SILVER TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1471.5 lumens
Efficiency: N/A
Efficacy: 106.6 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.67 / 0.65
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

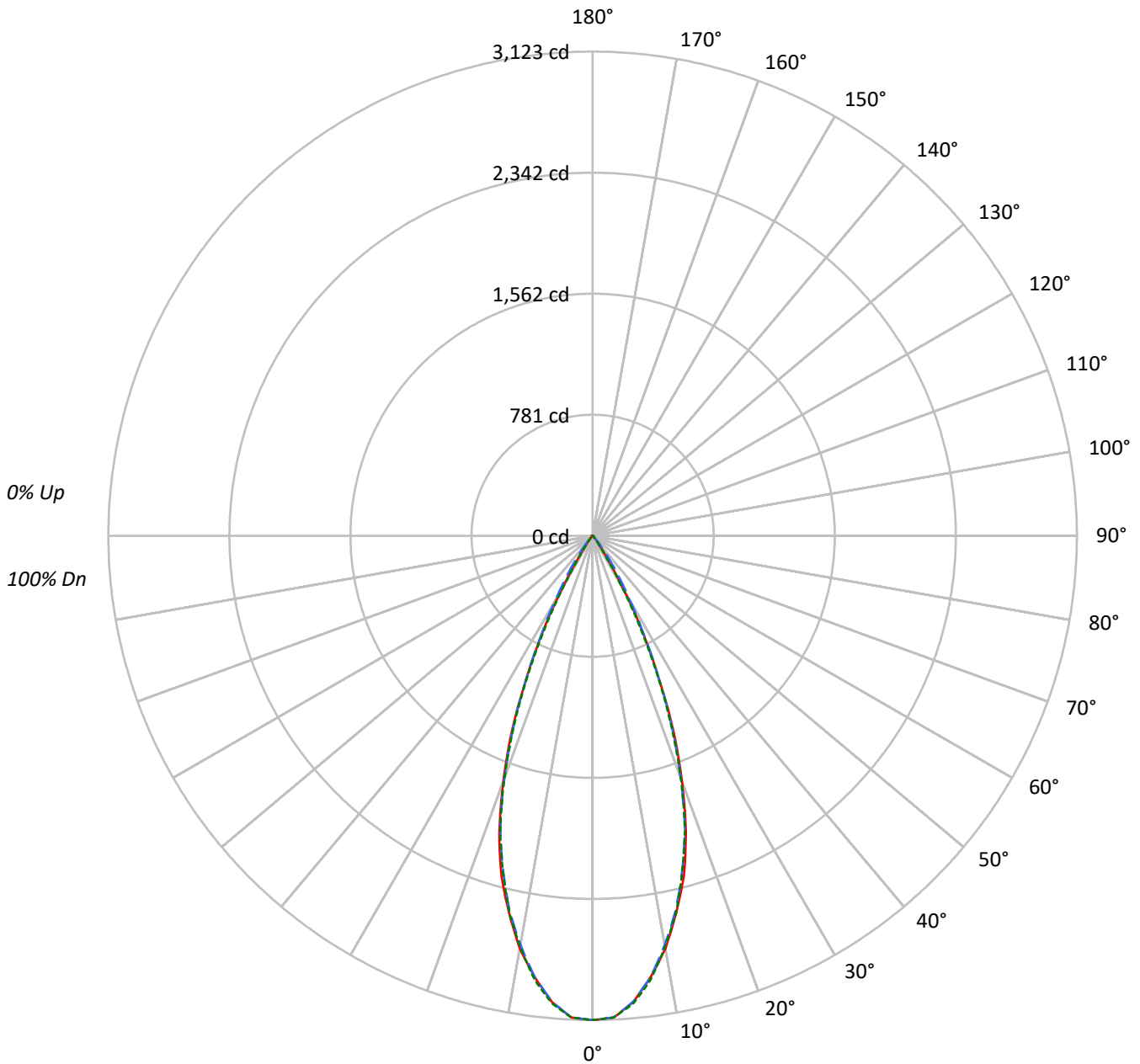
Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									20									20									20									
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	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95																			
2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	94	92	91																			
3	105	100	96	93	104	99	95	92	96	93	90	94	91	89	92	89	88	86																			
4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	86	84	82																			
5	97	91	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78																			
6	94	86	81	78	92	86	81	78	84	80	77	83	79	77	82	79	76	75																			
7	90	83	78	74	89	82	77	74	81	77	74	80	76	73	79	75	73	72																			
8	87	79	74	71	86	79	74	71	78	73	70	77	73	70	76	72	70	69																			
9	84	76	71	68	83	75	71	68	74	70	67	74	70	67	73	69	67	66																			
10	81	73	68	65	80	72	68	65	72	67	65	71	67	64	70	67	64	63																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	537851	537851	537851
5°	521667	521252	523257
10°	472752	468502	470531
15°	405307	398282	398496
20°	308709	304457	305080
25°	189894	190540	186359
30°	77220	94740	70538
35°	16567	41923	15831
40°	5463	13557	5733
45°	2533	4798	2533
50°	1876	2492	1876
55°	1742	2102	1742
60°	1584	1998	1584
65°	1426	1875	1875
70°	1762	1762	1762
75°	1530	1530	1530
80°	1190	1190	2281
85°	2371	2371	2371

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 4798 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	277.4	18.9
10°-20°	615.7	41.8
20°-30°	454.7	30.9
30°-40°	97.8	6.6
40°-50°	12.5	0.9
50°-60°	5.6	0.4
60°-70°	4.3	0.3
70°-80°	2.7	0.2
80°-90°	0.9	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°	1347.8	91.6
0°-40°	1445.6	98.2
0°-60°	1463.7	99.5
0°-90°	1471.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1471.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3123	3123	3123	3123	3123	
5°	3018	3015	3015	3014	3027	278
15°	2273	2252	2234	2241	2235	620
25°	999	1012	1003	998	981	456
35°	79	114	199	101	75	77
45°	10	12	20	12	10	9
55°	6	6	7	6	6	5
65°	4	5	5	5	5	4
75°	2	2	2	2	2	2
85°	1	1	1	1	1	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3123.0	3123.0	3123.0	3123.0	3123.0
2.5°	3110.2	3109.0	3110.2	3111.4	3110.2
5°	3017.5	3015.1	3015.1	3014.0	3026.7
7.5°	2869.1	2870.2	2867.9	2876.0	2884.2
10°	2703.3	2682.4	2679.0	2694.0	2690.6
12.5°	2490.0	2491.2	2473.8	2478.4	2486.5
15°	2273.2	2252.4	2233.8	2240.8	2235.0
17.5°	2002.0	1991.5	1976.5	1977.6	1981.1
20°	1684.4	1686.7	1661.2	1670.4	1664.6
22.5°	1360.9	1344.7	1338.9	1328.5	1322.7
25°	999.3	1012.0	1002.7	998.1	980.7
27.5°	695.5	697.9	709.4	685.1	648.0
30°	388.3	432.4	476.4	410.4	354.7
32.5°	186.6	231.8	317.6	214.5	164.6
35°	78.8	113.6	199.4	100.9	75.3
37.5°	41.7	54.5	111.3	51.0	39.4
40°	24.3	30.1	60.3	30.1	25.5
42.5°	13.9	18.5	33.6	18.5	15.1
45°	10.4	11.6	19.7	11.6	10.4
47.5°	8.1	9.3	11.6	9.3	8.1
50°	7.0	7.0	9.3	7.0	7.0
52.5°	5.8	7.0	7.0	7.0	7.0
55°	5.8	5.8	7.0	5.8	5.8
57.5°	5.8	5.8	5.8	5.8	5.8
60°	4.6	4.6	5.8	5.8	4.6
62.5°	4.6	4.6	4.6	4.6	4.6
65°	3.5	4.6	4.6	4.6	4.6
67.5°	3.5	3.5	4.6	3.5	3.5
70°	3.5	3.5	3.5	3.5	3.5
72.5°	2.3	2.3	3.5	3.5	3.5
75°	2.3	2.3	2.3	2.3	2.3
77.5°	1.2	2.3	2.3	2.3	2.3
80°	1.2	1.2	1.2	2.3	2.3
82.5°	1.2	1.2	1.2	1.2	1.2
85°	1.2	1.2	1.2	1.2	1.2
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



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Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

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