

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: P886728

Luminaire Tested: ML310LSFL9FS1E-TIR4D40FL-TL3SDMB-1000LM-3000K

Issue Date: 7/8/2024

Test Information

Test Method: LM-79-2019
Report Number: P886728
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-18)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/8/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D40FL-TL3SDMB-1000LM-3000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: -

Summary

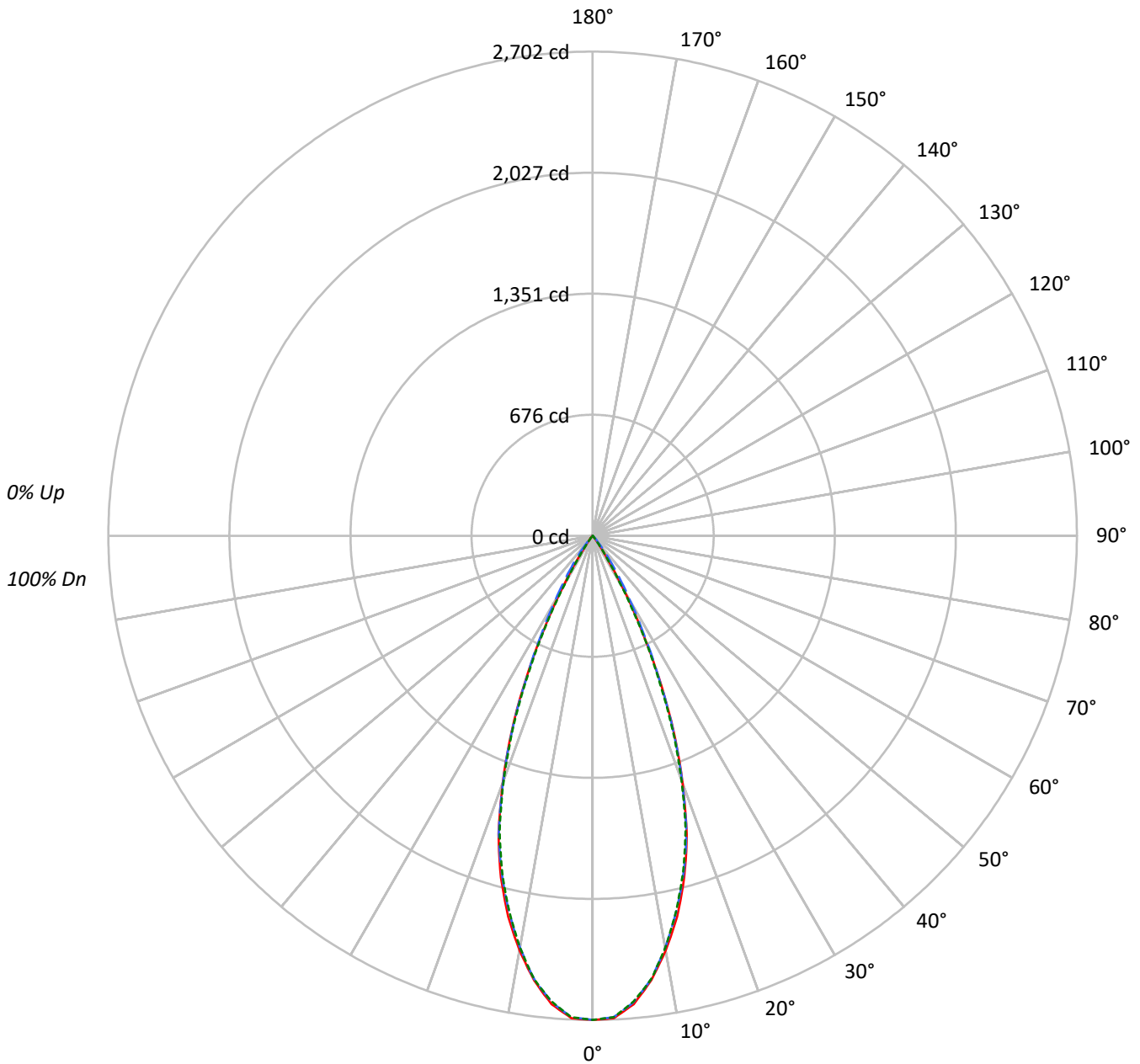
Lumens per Lamp: N/A
Luminaire Lumens: 1266.4 lumens
Efficiency: N/A
Efficacy: 91.8 lumens/watt
Spacing Criteria (0/90/45): 0.68 / 0.68 / 0.65
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

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					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	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			
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95					95			
2	110	106	103	100	108	104	101	99	101	99	97	98	96	94	96	94	93	91					91			
3	106	100	96	93	104	99	95	92	97	94	91	94	92	90	92	90	88	87					87			
4	102	96	91	88	100	94	90	87	92	89	86	91	88	85	89	86	84	83					83			
5	98	91	86	83	96	90	86	82	88	85	82	87	84	81	85	83	80	79					79			
6	94	87	82	79	93	86	82	78	85	81	78	84	80	77	82	79	77	76					76			
7	91	83	78	75	90	83	78	75	81	77	74	80	77	74	79	76	74	72					72			
8	87	80	75	71	86	79	74	71	78	74	71	77	73	71	76	73	70	69					69			
9	84	76	72	68	83	76	71	68	75	71	68	74	71	68	74	70	68	66					66			
10	81	73	69	65	80	73	68	65	72	68	65	72	68	65	71	67	65	64					64			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	465311	465311	465311
5°	453656	451685	451149
10°	410687	408151	408151
15°	352192	348876	347218
20°	268572	268004	265548
25°	166406	165437	161105
30°	67813	82847	60177
35°	14171	35742	12846
40°	3485	10949	3485
45°	755	3020	999
50°	268	831	268
55°	0	300	0
60°	0	0	0
65°	0	0	0
70°	0	0	0
75°	0	0	0
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 3020 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.7	19.0
10°-20°	537.2	42.4
20°-30°	396.9	31.3
30°-40°	84.2	6.7
40°-50°	7.0	0.6
50°-60°	0.4	0.0
60°-70°	0.0	0.0
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°	1174.8	92.8
0°-40°	1259.1	99.4
0°-60°	1266.4	100.0
0°-90°	1266.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1266.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2702	2702	2702	2702	2702	
5°	2624	2617	2613	2612	2610	241
15°	1975	1974	1957	1950	1947	541
25°	876	881	871	870	848	395
35°	67	97	170	89	61	65
45°	3	5	12	5	4	4
55°	0	0	1	0	0	0
65°	0	0	0	0	0	0
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2701.8	2701.8	2701.8	2701.8	2701.8
2.5°	2694.6	2692.5	2689.4	2689.4	2689.4
5°	2624.1	2616.9	2612.7	2611.7	2609.6
7.5°	2502.9	2494.6	2496.6	2496.6	2496.6
10°	2348.4	2338.1	2333.9	2333.9	2333.9
12.5°	2177.4	2178.5	2151.5	2151.5	2147.4
15°	1975.3	1974.3	1956.7	1950.5	1947.4
17.5°	1746.3	1745.3	1741.1	1725.6	1724.5
20°	1465.4	1470.6	1462.3	1452.0	1448.9
22.5°	1181.5	1176.3	1173.2	1173.2	1158.7
25°	875.7	880.9	870.6	869.5	847.8
27.5°	584.5	621.8	616.6	590.7	564.8
30°	341.0	383.5	416.6	355.5	302.6
32.5°	159.6	203.1	274.6	190.7	146.1
35°	67.4	97.4	170.0	89.1	61.1
37.5°	32.1	44.6	95.3	42.5	29.0
40°	15.5	21.8	48.7	21.8	15.5
42.5°	8.3	11.4	24.9	10.4	8.3
45°	3.1	5.2	12.4	5.2	4.1
47.5°	2.1	2.1	5.2	2.1	2.1
50°	1.0	1.0	3.1	1.0	1.0
52.5°	0.0	1.0	1.0	1.0	0.0
55°	0.0	0.0	1.0	0.0	0.0
57.5°	0.0	0.0	0.0	0.0	0.0
60°	0.0	0.0	0.0	0.0	0.0
62.5°	0.0	0.0	0.0	0.0	0.0
65°	0.0	0.0	0.0	0.0	0.0
67.5°	0.0	0.0	0.0	0.0	0.0
70°	0.0	0.0	0.0	0.0	0.0
72.5°	0.0	0.0	0.0	0.0	0.0
75°	0.0	0.0	0.0	0.0	0.0
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
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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