

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: P886734

Luminaire Tested: ML310LSFL9FS1E-TIR4D40FL-TL3SDMW-1000LM-3500K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886734
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-16)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D40FL-TL3SDMW-1000LM-3500K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1358.0 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Spacing Criteria (0/90/45): 0.69 / 0.68 / 0.65
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')
CIE Type: Direct

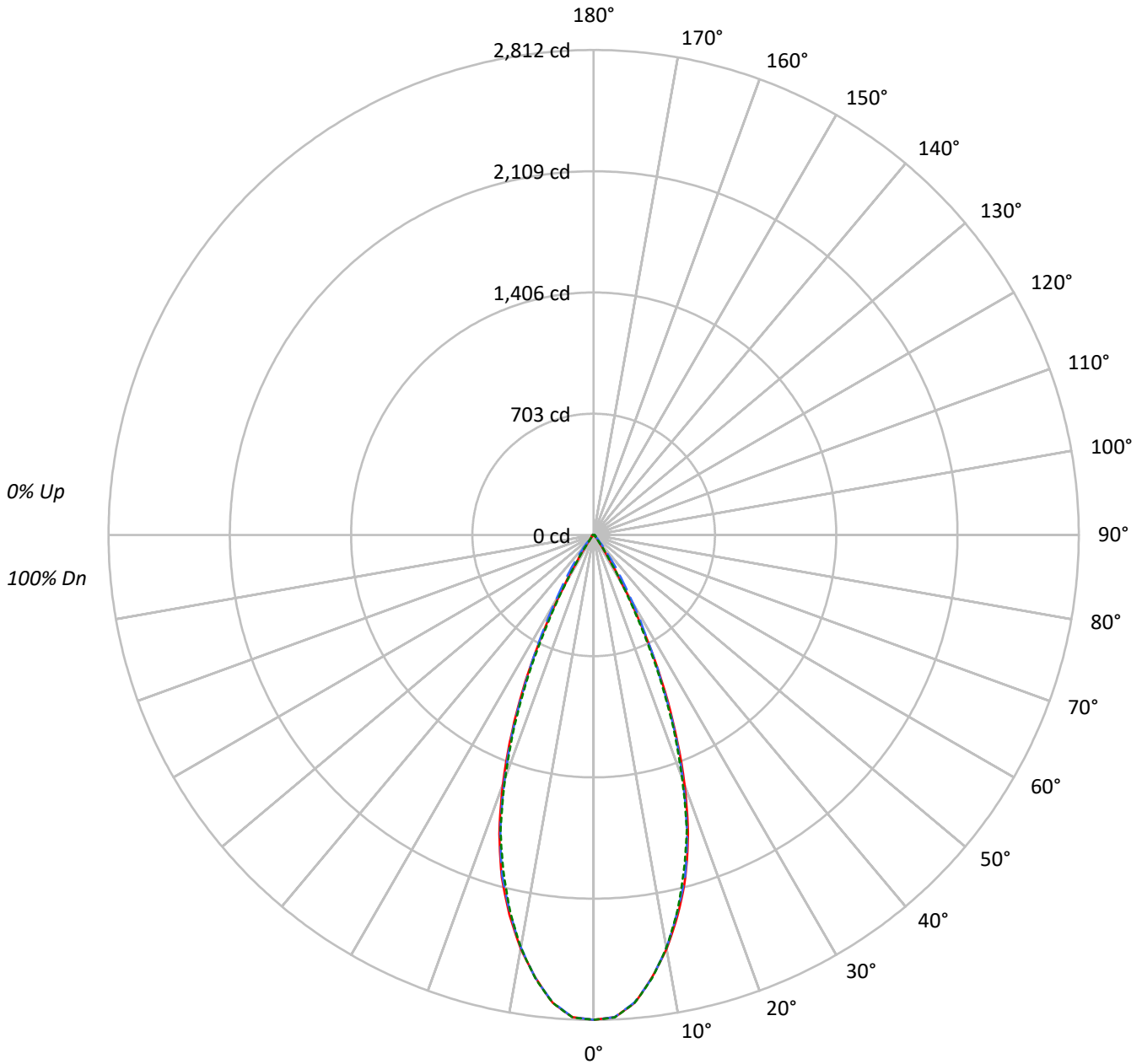
Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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									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	109	107	112	110	108	106	106	104	102	102	101	99	98	97	97	95																			
2	109	105	102	99	107	103	100	98	100	98	95	97	95	93	95	93	92	90																			
3	105	99	95	92	103	98	94	91	96	92	90	93	90	88	91	89	87	85																			
4	101	94	90	86	99	93	89	85	91	87	85	89	86	84	87	85	83	81																			
5	97	90	85	81	95	89	84	81	87	83	80	86	82	79	84	81	79	77																			
6	93	86	80	77	92	85	80	77	83	79	76	82	78	76	81	78	75	74																			
7	90	82	77	73	88	81	76	73	80	76	73	79	75	72	78	74	72	71																			
8	86	78	73	70	85	78	73	70	77	72	69	76	72	69	75	71	69	68																			
9	83	75	70	67	82	74	70	66	74	69	66	73	69	66	72	68	66	65																			
10	80	72	67	64	79	72	67	64	71	66	64	70	66	63	69	66	63	62																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	484238	484238	484238
5°	470926	470183	470926
10°	425901	424782	424957
15°	366545	365029	359877
20°	282336	277058	274308
25°	177352	173095	168212
30°	68887	88018	63577
35°	16189	38664	15726
40°	6250	13939	6250
45°	3653	5992	3653
50°	3162	3724	3430
55°	3543	3543	3543
60°	3686	3686	3686
65°	3505	3912	3505
70°	3223	3777	3777
75°	3527	3527	3527
80°	3174	3174	4265
85°	2174	4150	4150

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5992 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	250.2	18.4
10°-20°	558.0	41.1
20°-30°	413.5	30.5
30°-40°	92.9	6.8
40°-50°	16.2	1.2
50°-60°	10.4	0.8
60°-70°	9.0	0.7
70°-80°	5.7	0.4
80°-90°	2.0	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°	1221.7	90.0
0°-40°	1314.6	96.8
0°-60°	1341.2	98.8
0°-90°	1358.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1358.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2812	2812	2812	2812	2812	
5°	2724	2723	2720	2718	2724	250
15°	2056	2042	2047	2020	2018	562
25°	933	920	911	899	885	416
35°	77	109	184	104	75	71
45°	15	17	25	17	15	13
55°	12	12	12	12	12	10
65°	9	10	10	10	9	8
75°	5	5	5	5	5	5
85°	1	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2811.7	2811.7	2811.7	2811.7	2811.7
2.5°	2798.9	2801.0	2798.9	2798.9	2799.9
5°	2724.0	2723.0	2719.7	2717.6	2724.0
7.5°	2588.2	2591.5	2590.4	2593.6	2591.5
10°	2435.4	2425.7	2429.0	2424.7	2430.0
12.5°	2254.7	2252.6	2240.8	2237.6	2235.5
15°	2055.8	2041.9	2047.3	2019.5	2018.4
17.5°	1818.5	1808.9	1799.3	1795.0	1795.0
20°	1540.5	1536.3	1511.7	1509.5	1496.7
22.5°	1238.0	1219.8	1220.9	1217.7	1198.4
25°	933.3	920.5	910.9	899.1	885.2
27.5°	621.1	645.7	646.8	619.0	569.8
30°	346.4	398.8	442.6	373.1	319.7
32.5°	171.1	222.4	291.9	205.3	162.5
35°	77.0	109.0	183.9	103.7	74.8
37.5°	41.7	55.6	110.1	53.5	40.6
40°	27.8	33.1	62.0	33.1	27.8
42.5°	19.2	22.5	37.4	22.5	20.3
45°	15.0	17.1	24.6	17.1	15.0
47.5°	12.8	13.9	18.2	13.9	13.9
50°	11.8	12.8	13.9	12.8	12.8
52.5°	11.8	11.8	12.8	11.8	11.8
55°	11.8	11.8	11.8	11.8	11.8
57.5°	10.7	10.7	11.8	10.7	10.7
60°	10.7	10.7	10.7	10.7	10.7
62.5°	9.6	9.6	9.6	9.6	9.6
65°	8.6	9.6	9.6	9.6	8.6
67.5°	7.5	8.6	8.6	8.6	8.6
70°	6.4	7.5	7.5	7.5	7.5
72.5°	6.4	6.4	6.4	6.4	6.4
75°	5.3	5.3	5.3	5.3	5.3
77.5°	4.3	4.3	4.3	5.3	4.3
80°	3.2	3.2	3.2	4.3	4.3
82.5°	2.1	2.1	2.1	3.2	3.2
85°	1.1	2.1	2.1	2.1	2.1
87.5°	1.1	1.1	1.1	1.1	1.1
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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