

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: P886700

Luminaire Tested: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMB-1000LM-4000K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886700
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-15)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMB-1000LM-4000K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1138.2 lumens
Efficiency: N/A
Efficacy: 82.5 lumens/watt
Spacing Criteria (0/90/45): 0.5 / 0.49 / 0.52
Luminous Opening: Rectangular (W 0.25' x L: 0.25' x H: 0')

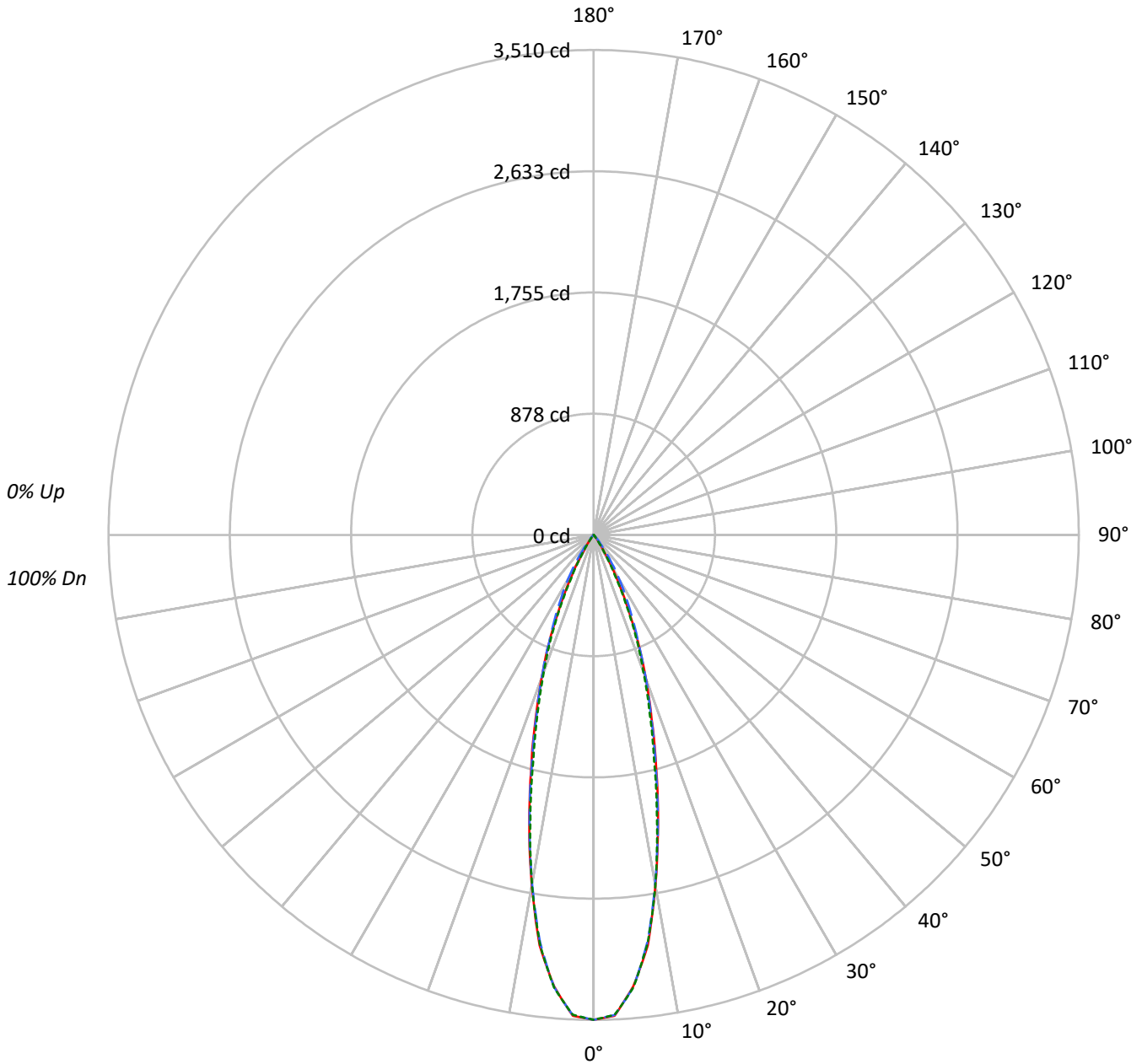
CIE Type: Direct

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			100																
1	115	112	110	109	112	110	108	107	106	105	104	103	102	100	99	98	98	96			96																
2	110	107	103	101	108	105	102	100	102	99	97	99	97	95	96	95	93	92			92																
3	106	101	98	94	105	100	97	94	98	95	92	95	93	91	93	91	89	88			88																
4	103	97	93	89	101	96	92	89	94	90	88	92	89	87	90	88	86	84			84																
5	99	93	88	85	98	92	88	84	90	86	84	89	85	83	87	84	82	81			81																
6	96	89	84	81	94	88	84	81	87	83	80	85	82	80	84	81	79	78			78																
7	92	85	81	77	91	85	80	77	84	80	77	83	79	77	82	78	76	75			75																
8	89	82	78	74	88	82	77	74	81	77	74	80	76	74	79	76	73	72			72																
9	87	79	75	72	86	79	74	71	78	74	71	77	74	71	76	73	71	70			70																
10	84	76	72	69	83	76	72	69	75	71	69	75	71	69	74	71	68	67			67																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	604433	604433	604433
5°	567013	568172	568742
10°	450315	448199	450122
15°	311790	308848	300379
20°	201053	201053	192549
25°	110843	124905	105389
30°	46793	72944	40648
35°	14633	31348	12068
40°	2990	11174	2990
45°	1072	2679	1072
50°	295	884	295
55°	0	330	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: 2679 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.8	25.6
10°-20°	479.6	42.1
20°-30°	287.4	25.2
30°-40°	72.7	6.4
40°-50°	7.2	0.6
50°-60°	0.6	0.1
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°	1057.8	92.9
0°-40°	1130.4	99.3
0°-60°	1138.2	100.0
0°-90°	1138.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1138.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3510	3510	3510	3510	3510	
5°	3280	3292	3286	3286	3290	291
15°	1749	1739	1732	1720	1685	484
25°	583	633	657	615	555	275
35°	70	99	149	87	57	53
45°	4	7	11	7	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	0



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3509.6	3509.6	3509.6	3509.6	3509.6
2.5°	3483.1	3475.4	3477.6	3475.4	3476.5
5°	3279.8	3292.0	3286.5	3286.5	3289.8
7.5°	2997.0	2978.3	2974.9	2973.8	2984.9
10°	2575.0	2587.2	2562.9	2569.5	2573.9
12.5°	2150.8	2147.5	2145.3	2134.3	2118.8
15°	1748.7	1738.8	1732.2	1720.0	1684.7
17.5°	1396.3	1395.2	1380.9	1357.7	1344.4
20°	1097.0	1102.5	1097.0	1073.8	1050.6
22.5°	840.7	867.2	846.2	837.4	800.9
25°	583.3	633.0	657.3	615.3	554.6
27.5°	386.6	439.7	501.5	415.4	354.6
30°	235.3	281.7	366.8	264.0	204.4
32.5°	133.7	174.5	249.7	159.1	112.7
35°	69.6	99.4	149.1	87.3	57.4
37.5°	28.7	49.7	86.2	43.1	25.4
40°	13.3	21.0	49.7	19.9	13.3
42.5°	7.7	9.9	25.4	9.9	7.7
45°	4.4	6.6	11.0	6.6	4.4
47.5°	3.3	3.3	5.5	3.3	3.3
50°	1.1	2.2	3.3	2.2	1.1
52.5°	1.1	1.1	2.2	1.1	1.1
55°	0.0	0.0	1.1	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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