

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: P886702

Luminaire Tested: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMW-1000LM-2700K

Issue Date: 7/5/2024

Test Information

Test Method: LM-79-2019
Report Number: P886702
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-13)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/5/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML310LSFL9FS1E-TIR4D25NFL-TL3SDMW-1000LM-2700K
Description: 3IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1095.0 lumens
Efficiency: N/A
Efficacy: 79.3 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

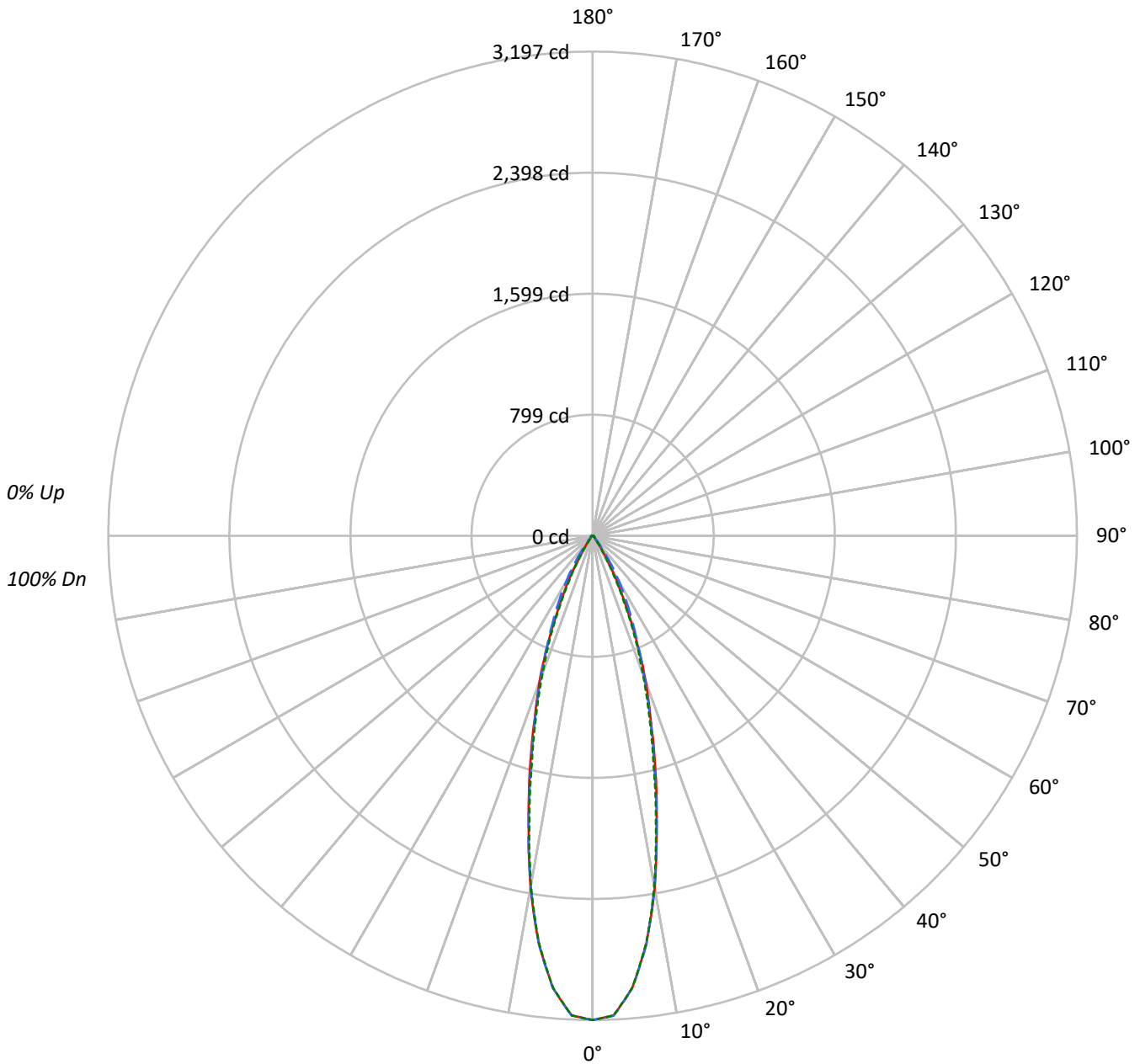
Input Watts (W): 13.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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																			
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	98	98	97	95																			
2	110	105	102	99	107	104	101	98	101	98	96	98	96	94	95	93	92	90																			
3	105	100	96	92	103	98	95	91	96	93	90	94	91	89	91	89	87	86																			
4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	85	83	82																			
5	97	91	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78																			
6	94	87	82	78	93	86	81	78	84	80	77	83	80	77	82	79	76	75																			
7	91	83	78	75	89	82	78	74	81	77	74	80	76	74	79	76	73	72																			
8	87	80	75	71	86	79	75	71	78	74	71	77	74	71	76	73	71	69																			
9	85	77	72	69	84	76	72	69	75	71	68	75	71	68	74	70	68	67																			
10	82	74	69	66	81	74	69	66	73	69	66	72	68	66	71	68	65	64																			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	550665	550665	550665
5°	518382	518382	518036
10°	412995	411247	410372
15°	285402	280053	275952
20°	188004	183789	176641
25°	102405	116087	97085
30°	45739	69583	39574
35°	15768	30906	13876
40°	5845	13489	5845
45°	4628	6089	4628
50°	4019	4823	4019
55°	4204	4504	4204
60°	4133	4478	4133
65°	4075	4483	4483
70°	4028	4532	4532
75°	3993	3993	4658
80°	3967	3967	4959
85°	3952	3952	3952

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 6089 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	265.2	24.2
10°-20°	437.8	40.0
20°-30°	266.4	24.3
30°-40°	75.0	6.9
40°-50°	17.7	1.6
50°-60°	13.0	1.2
60°-70°	10.8	1.0
70°-80°	6.9	0.6
80°-90°	2.2	0.2
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°	969.4	88.5
0°-40°	1044.4	95.4
0°-60°	1075.1	98.2
0°-90°	1095.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1095.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3197	3197	3197	3197	3197	
5°	2998	3000	2998	2998	2996	265
15°	1601	1586	1571	1563	1548	443
25°	539	589	611	569	511	256
35°	75	105	147	94	66	57
45°	19	20	25	20	19	15
55°	14	14	15	14	14	12
65°	10	11	11	11	11	10
75°	6	6	6	7	7	6
85°	2	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°	3197.4	3197.4	3197.4	3197.4	3197.4
2.5°	3169.4	3168.4	3173.4	3170.4	3169.4
5°	2998.5	2999.5	2998.5	2998.5	2996.5
7.5°	2715.5	2711.5	2720.5	2712.5	2711.5
10°	2361.6	2351.6	2351.6	2343.6	2346.6
12.5°	1950.7	1958.7	1956.7	1938.7	1929.7
15°	1600.7	1585.7	1570.7	1562.7	1547.7
17.5°	1272.8	1273.8	1261.8	1242.8	1238.8
20°	1025.8	1009.8	1002.8	989.8	963.8
22.5°	770.9	798.9	782.9	769.9	733.9
25°	538.9	588.9	610.9	568.9	510.9
27.5°	369.9	399.9	471.9	385.9	333.9
30°	230.0	275.0	349.9	255.0	199.0
32.5°	137.0	174.0	243.0	158.0	119.0
35°	75.0	105.0	147.0	94.0	66.0
37.5°	39.0	58.0	92.0	54.0	37.0
40°	26.0	33.0	60.0	31.0	26.0
42.5°	21.0	24.0	38.0	23.0	21.0
45°	19.0	20.0	25.0	20.0	19.0
47.5°	17.0	18.0	19.0	18.0	17.0
50°	15.0	17.0	18.0	17.0	15.0
52.5°	15.0	15.0	16.0	15.0	15.0
55°	14.0	14.0	15.0	14.0	14.0
57.5°	13.0	14.0	14.0	14.0	13.0
60°	12.0	13.0	13.0	13.0	12.0
62.5°	11.0	12.0	12.0	12.0	12.0
65°	10.0	11.0	11.0	11.0	11.0
67.5°	9.0	10.0	10.0	10.0	10.0
70°	8.0	9.0	9.0	9.0	9.0
72.5°	7.0	8.0	8.0	8.0	8.0
75°	6.0	6.0	6.0	7.0	7.0
77.5°	5.0	5.0	5.0	6.0	6.0
80°	4.0	4.0	4.0	5.0	5.0
82.5°	3.0	3.0	3.0	3.0	3.0
85°	2.0	2.0	2.0	2.0	2.0
87.5°	1.0	1.0	1.0	1.0	1.0
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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