

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: P887125

Luminaire Tested: ML412LSFLD2W1E-TIR4D55WFL-TL4SDMW-600LM-3000K

Issue Date: 7/10/2024

Test Information

Test Method: LM-79-2019
Report Number: P887125
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-54)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/10/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFLD2W1E-TIR4D55WFL-TL4SDMW-600LM-3000K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 2700K CCT
Ballast/Driver: -

Summary

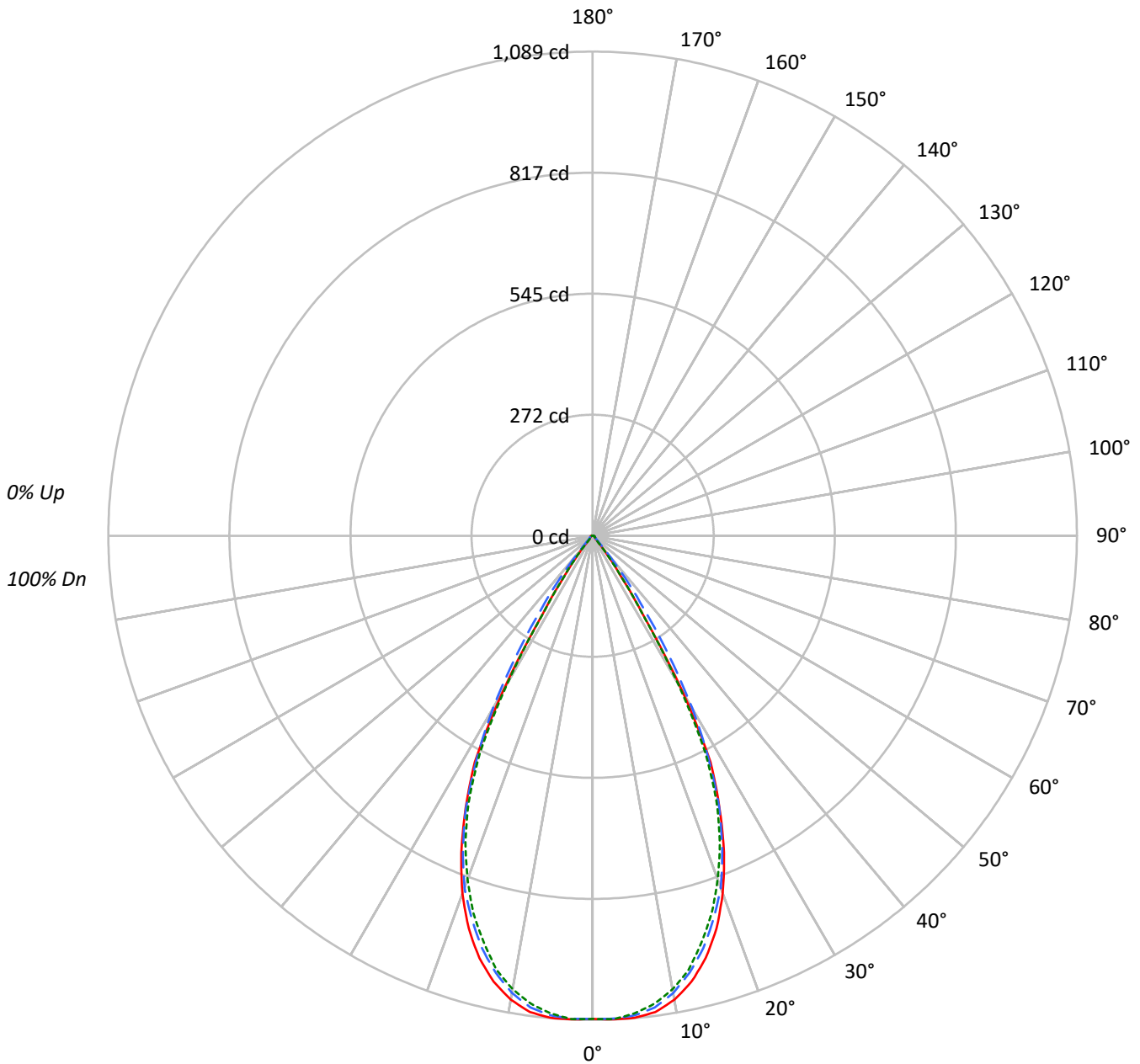
Lumens per Lamp: N/A
Luminaire Lumens: 801.6 lumens
Efficiency: N/A
Efficacy: 85.3 lumens/watt
Spacing Criteria (0/90/45): 0.89 / 0.88 / 0.83
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.4
Input Voltage (V): NR
Input Current (Ain): 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								
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94								
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88								
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	85	83								
4	99	92	87	83	97	91	86	82	89	85	81	87	83	81	85	82	80	78								
5	95	87	81	77	93	86	81	77	84	80	76	82	79	76	81	78	75	74								
6	90	82	77	73	89	81	76	72	80	75	72	78	74	71	77	74	71	70								
7	86	78	72	68	85	77	72	68	76	71	68	75	71	67	74	70	67	66								
8	83	74	68	64	81	73	68	64	72	67	64	71	67	64	70	66	64	62								
9	79	70	65	61	78	70	64	61	69	64	61	68	64	60	67	63	60	59								
10	76	67	61	58	75	66	61	58	66	61	58	65	60	57	64	60	57	56								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	105265	105265	105265
5°	105832	105297	104860
10°	104233	102708	101892
15°	98618	96351	94907
20°	88216	86856	84742
25°	72162	71980	70441
30°	45114	50058	42944
35°	12737	23783	13198
40°	2795	6361	2238
45°	1206	2192	1137
50°	1160	1251	1160
55°	1115	1216	1115
60°	1182	1182	1182
65°	1146	1261	1146
70°	1105	1246	1105
75°	1235	1235	1235
80°	1227	1227	1227
85°	1223	1223	1223

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 2192 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.3	12.8
10°-20°	267.8	33.4
20°-30°	298.4	37.2
30°-40°	106.6	13.3
40°-50°	10.5	1.3
50°-60°	6.2	0.8
60°-70°	5.1	0.6
70°-80°	3.5	0.4
80°-90°	1.2	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°	668.5	83.4
0°-40°	775.0	96.7
0°-60°	791.8	98.8
0°-90°	801.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	801.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1087	1087	1087	1087	1087	
5°	1088	1088	1083	1082	1078	103
15°	983	976	961	947	946	273
25°	675	679	673	658	659	301
35°	108	124	201	122	112	88
45°	9	9	16	9	8	8
55°	7	7	7	7	7	6
65°	5	6	6	5	5	5
75°	3	3	3	3	3	3
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°	1086.6	1086.6	1086.6	1086.6	1086.6
2.5°	1088.8	1089.4	1087.2	1087.2	1088.3
5°	1088.3	1088.3	1082.8	1082.2	1078.3
7.5°	1080.5	1077.8	1070.1	1064.0	1061.8
10°	1059.6	1054.6	1044.1	1034.1	1035.8
12.5°	1027.5	1021.4	1006.5	997.7	999.3
15°	983.3	976.1	960.7	947.4	946.3
17.5°	926.4	918.7	903.8	894.4	890.5
20°	855.7	852.4	842.5	825.3	822.0
22.5°	771.7	771.7	761.8	751.3	747.4
25°	675.1	678.9	673.4	658.5	659.0
27.5°	574.0	571.2	563.5	553.5	546.4
30°	403.3	443.6	447.5	425.9	383.9
32.5°	209.9	274.6	317.1	256.9	207.7
35°	107.7	124.3	201.1	122.1	111.6
37.5°	55.8	64.1	118.8	63.5	54.7
40°	22.1	29.8	50.3	29.3	17.7
42.5°	9.9	13.8	28.2	12.2	9.9
45°	8.8	9.4	16.0	8.8	8.3
47.5°	8.3	8.3	10.5	8.3	7.7
50°	7.7	7.7	8.3	7.7	7.7
52.5°	7.2	7.2	7.7	7.2	7.2
55°	6.6	7.2	7.2	7.2	6.6
57.5°	6.1	6.6	6.6	6.6	6.1
60°	6.1	6.1	6.1	6.1	6.1
62.5°	5.5	5.5	5.5	5.5	5.5
65°	5.0	5.5	5.5	5.0	5.0
67.5°	4.4	5.0	5.0	5.0	4.4
70°	3.9	4.4	4.4	4.4	3.9
72.5°	3.3	3.9	3.9	3.9	3.3
75°	3.3	3.3	3.3	3.3	3.3
77.5°	2.8	2.8	2.8	2.8	2.8
80°	2.2	2.2	2.2	2.2	2.2
82.5°	1.7	1.7	1.7	1.7	1.7
85°	1.1	1.1	1.1	1.1	1.1
87.5°	0.6	0.6	0.6	0.6	0.6
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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