

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: P887123

Luminaire Tested: ML412LSFLD2W1E-TIR4D55WFL-TL4SDMB-600LM-3000K

Issue Date: 7/10/2024

Test Information

Test Method: LM-79-2019
Report Number: P887123
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-56)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/10/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFLD2W1E-TIR4D55WFL-TL4SDMB-600LM-3000K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 769.6 lumens
Efficiency: N/A
Efficacy: 81.9 lumens/watt
Spacing Criteria (0/90/45): 0.89 / 0.87 / 0.83
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

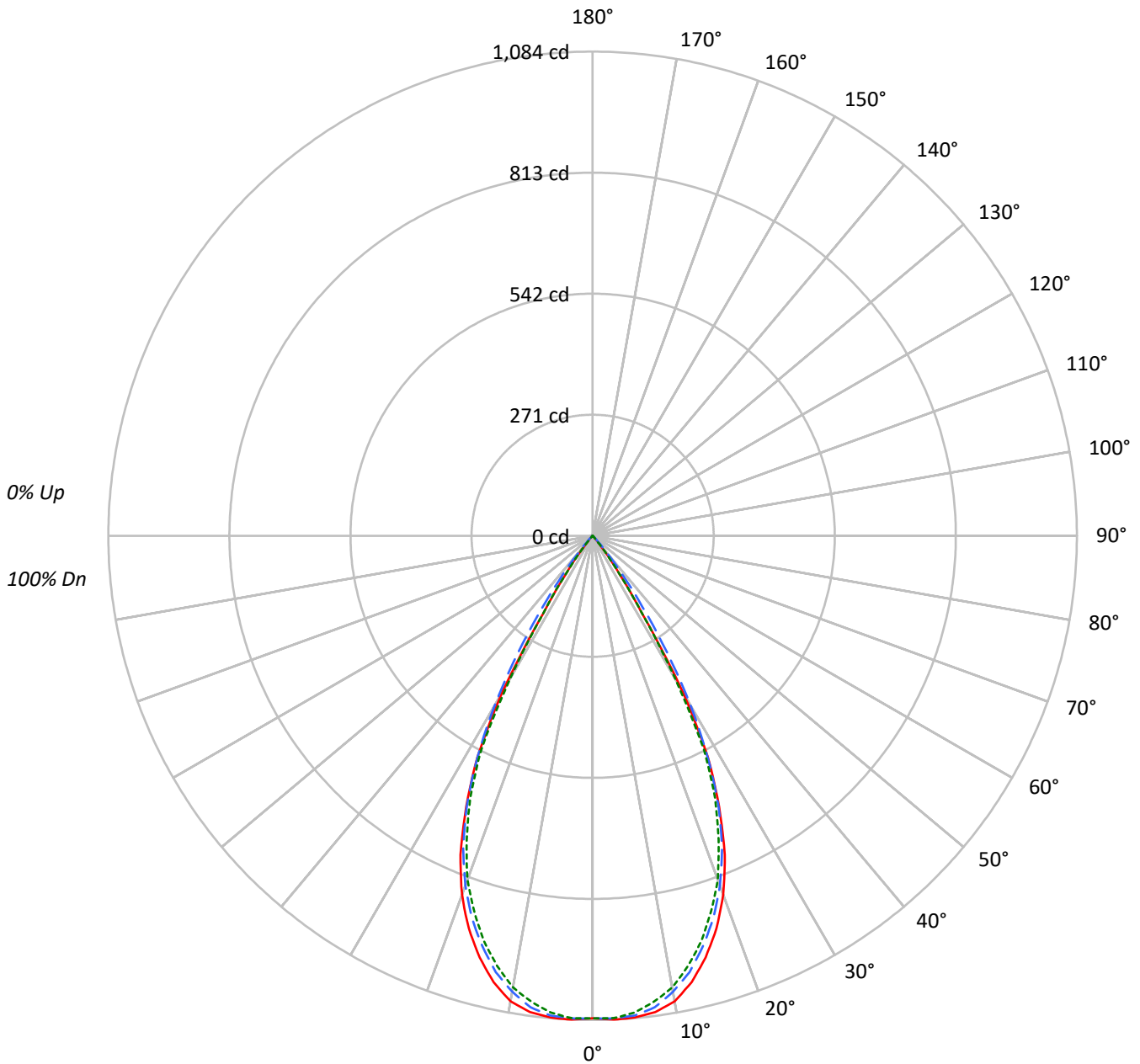
Input Watts (W): 9.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					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	109	107	112	109	107	106	105	104	102	102	100	99	98	97	96	95					95			
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	93	91	89					89			
3	104	99	94	91	103	97	93	90	95	91	89	92	90	87	90	88	86	84					84			
4	100	93	88	84	98	92	87	84	90	86	83	88	85	82	86	83	81	80					80			
5	96	88	83	79	94	87	82	79	85	81	78	84	80	77	82	79	77	75					75			
6	91	83	78	74	90	83	78	74	81	77	73	80	76	73	79	75	73	71					71			
7	87	79	74	70	86	78	73	70	77	73	69	76	72	69	75	71	69	67					67			
8	84	75	70	66	83	75	70	66	74	69	66	73	68	65	72	68	65	64					64			
9	80	72	66	63	79	71	66	62	70	66	62	69	65	62	69	65	62	61					61			
10	77	68	63	59	76	68	63	59	67	62	59	66	62	59	66	62	59	58					58			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	104664	104664	104664
5°	105278	104850	104208
10°	104105	101931	101006
15°	97996	95499	94225
20°	88134	85856	84433
25°	71595	71178	69286
30°	45069	49085	41176
35°	12347	23002	12217
40°	1745	5451	1252
45°	82	1206	82
50°	0	166	0
55°	0	0	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: 1206 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.6	13.2
10°-20°	266.0	34.6
20°-30°	295.1	38.3
30°-40°	102.1	13.3
40°-50°	4.7	0.6
50°-60°	0.1	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°	662.7	86.1
0°-40°	764.8	99.4
0°-60°	769.6	100.0
0°-90°	769.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	769.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1080	1080	1080	1080	1080	
5°	1083	1081	1078	1073	1072	103
15°	977	968	952	943	940	272
25°	670	665	666	653	648	298
35°	104	118	194	120	103	84
45°	1	2	9	2	1	2
55°	0	0	0	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°	1080.4	1080.4	1080.4	1080.4	1080.4
2.5°	1084.3	1082.6	1081.5	1081.0	1081.0
5°	1082.6	1081.0	1078.2	1073.2	1071.6
7.5°	1075.4	1069.9	1064.9	1057.2	1052.2
10°	1058.3	1051.1	1036.2	1029.0	1026.8
12.5°	1023.5	1015.2	1000.8	989.8	986.5
15°	977.1	968.2	952.2	942.8	939.5
17.5°	921.8	915.2	898.0	885.3	881.5
20°	854.9	845.0	832.8	821.8	819.0
22.5°	773.1	764.3	757.1	743.3	736.7
25°	669.8	665.4	665.9	652.7	648.2
27.5°	558.7	561.5	556.5	551.5	540.5
30°	402.9	439.9	438.8	420.0	368.1
32.5°	202.8	264.7	310.0	250.3	206.1
35°	104.4	118.3	194.5	120.5	103.3
37.5°	47.0	54.7	108.9	54.2	45.9
40°	13.8	22.7	43.1	22.1	9.9
42.5°	2.2	6.6	20.4	4.4	2.2
45°	0.6	1.7	8.8	1.7	0.6
47.5°	0.6	0.6	2.8	0.6	0.0
50°	0.0	0.0	1.1	0.0	0.0
52.5°	0.0	0.0	0.6	0.0	0.0
55°	0.0	0.0	0.0	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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