

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: P886947

Luminaire Tested: ML412LSFL95FS1E-TIR4D55WFL-TL4SDSL-1020LM-3500K

Issue Date: 7/10/2024

Test Information

Test Method: LM-79-2019
Report Number: P886947
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-55)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/10/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL95FS1E-TIR4D55WFL-TL4SDSL-1020LM-3500K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 3500K CCT
Ballast/Driver: -

Summary

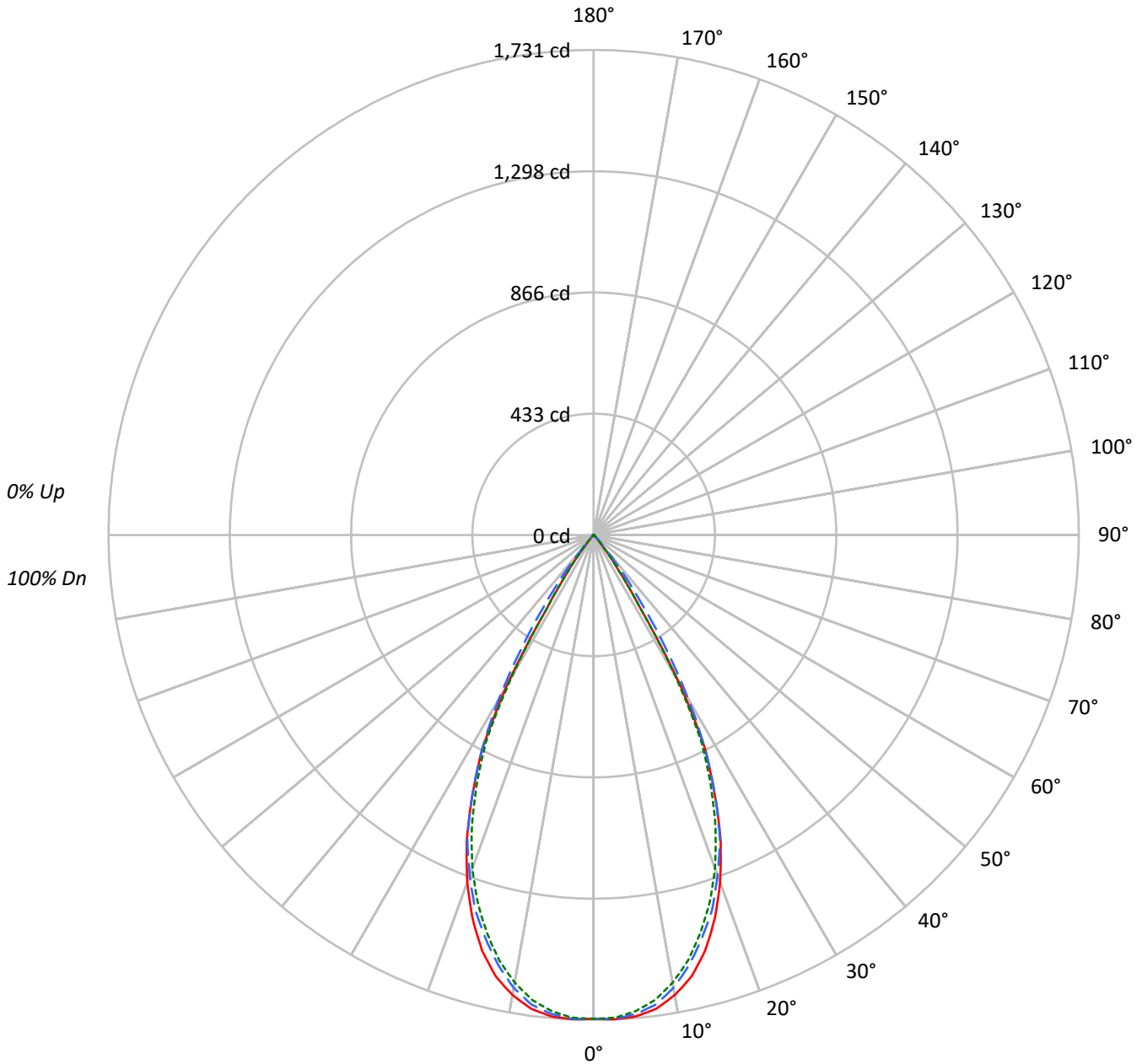
Lumens per Lamp: N/A
Luminaire Lumens: 1203.4 lumens
Efficiency: N/A
Efficacy: 68.4 lumens/watt
Spacing Criteria (0/90/45): 0.87 / 0.85 / 0.82
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
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	112	109	107	112	109	107	105	105	104	102	102	100	99	98	97	96	95								
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	94	92	91	89								
3	104	99	94	91	102	97	93	90	95	91	88	92	89	87	90	88	86	84								
4	100	93	88	84	98	92	87	84	90	86	83	88	85	82	86	83	81	80								
5	95	88	83	79	94	87	82	79	85	81	78	84	80	77	82	79	77	75								
6	91	83	78	74	90	83	78	74	81	77	73	80	76	73	79	75	72	71								
7	87	79	74	70	86	78	73	70	77	73	69	76	72	69	75	71	69	67								
8	84	75	70	66	83	75	69	66	74	69	66	73	68	65	72	68	65	64								
9	80	71	66	63	79	71	66	62	70	65	62	69	65	62	68	65	62	61								
10	77	68	63	59	76	68	63	59	67	62	59	66	62	59	66	62	59	58								

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	167275	167275	167275
5°	167748	166932	165959
10°	164022	161474	159585
15°	154090	149567	147481
20°	135938	133268	130433
25°	109359	109456	105800
30°	68616	75429	65529
35°	18851	34935	18757
40°	3275	8018	2327
45°	685	2055	575
50°	497	497	497
55°	422	422	422
60°	329	329	329
65°	183	390	183
70°	227	227	227
75°	299	299	299
80°	446	446	446
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 2055 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.6	13.4
10°-20°	416.6	34.6
20°-30°	455.0	37.8
30°-40°	156.7	13.0
40°-50°	9.2	0.8
50°-60°	2.0	0.2
60°-70°	1.3	0.1
70°-80°	0.8	0.1
80°-90°	0.2	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°	1033.2	85.9
0°-40°	1189.9	98.9
0°-60°	1201.0	99.8
0°-90°	1203.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1203.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1727	1727	1727	1727	1727	
5°	1725	1723	1717	1715	1707	163
15°	1536	1518	1491	1480	1470	426
25°	1023	1028	1024	1006	990	457
35°	159	183	295	180	159	129
45°	5	6	15	5	4	6
55°	2	2	2	2	2	2
65°	1	2	2	2	1	1
75°	1	1	1	1	1	1
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°	1726.7	1726.7	1726.7	1726.7	1726.7
2.5°	1730.8	1727.5	1729.2	1728.3	1725.0
5°	1725.0	1723.3	1716.6	1715.0	1706.6
7.5°	1705.8	1703.3	1691.6	1682.4	1674.9
10°	1667.4	1656.6	1641.5	1625.7	1622.3
12.5°	1614.0	1599.0	1572.3	1555.6	1555.6
15°	1536.4	1518.0	1491.3	1479.6	1470.5
17.5°	1436.2	1426.2	1403.7	1383.7	1376.1
20°	1318.6	1317.7	1292.7	1275.2	1265.2
22.5°	1183.4	1181.7	1177.5	1155.0	1136.6
25°	1023.1	1028.1	1024.0	1005.6	989.8
27.5°	860.4	865.4	862.1	837.9	831.2
30°	613.4	665.1	674.3	640.1	585.8
32.5°	307.1	397.2	478.2	386.4	305.4
35°	159.4	182.8	295.4	180.3	158.6
37.5°	75.1	89.3	169.4	87.6	73.4
40°	25.9	37.6	63.4	37.6	18.4
42.5°	6.7	13.4	32.5	10.0	7.5
45°	5.0	5.8	15.0	5.0	4.2
47.5°	3.3	3.3	6.7	3.3	3.3
50°	3.3	2.5	3.3	2.5	3.3
52.5°	2.5	2.5	2.5	2.5	2.5
55°	2.5	2.5	2.5	2.5	2.5
57.5°	1.7	1.7	1.7	1.7	1.7
60°	1.7	1.7	1.7	1.7	1.7
62.5°	1.7	1.7	1.7	1.7	1.7
65°	0.8	1.7	1.7	1.7	0.8
67.5°	0.8	0.8	1.7	0.8	0.8
70°	0.8	0.8	0.8	0.8	0.8
72.5°	0.8	0.8	0.8	0.8	0.8
75°	0.8	0.8	0.8	0.8	0.8
77.5°	0.8	0.8	0.8	0.8	0.8
80°	0.8	0.8	0.8	0.8	0.8
82.5°	0.0	0.0	0.0	0.8	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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