

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: P886936

Luminaire Tested: ML412LSFL95FS1E-TIR4D55WFL-TL4SDMB-1020LM-3000K

Issue Date: 7/10/2024

Test Information

Test Method: LM-79-2019
Report Number: P886936
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: ML412LSFL95FS1E-TIR4D55WFL-TL4SDMB-1020LM-3000K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 3000K CCT
Ballast/Driver: -

Summary

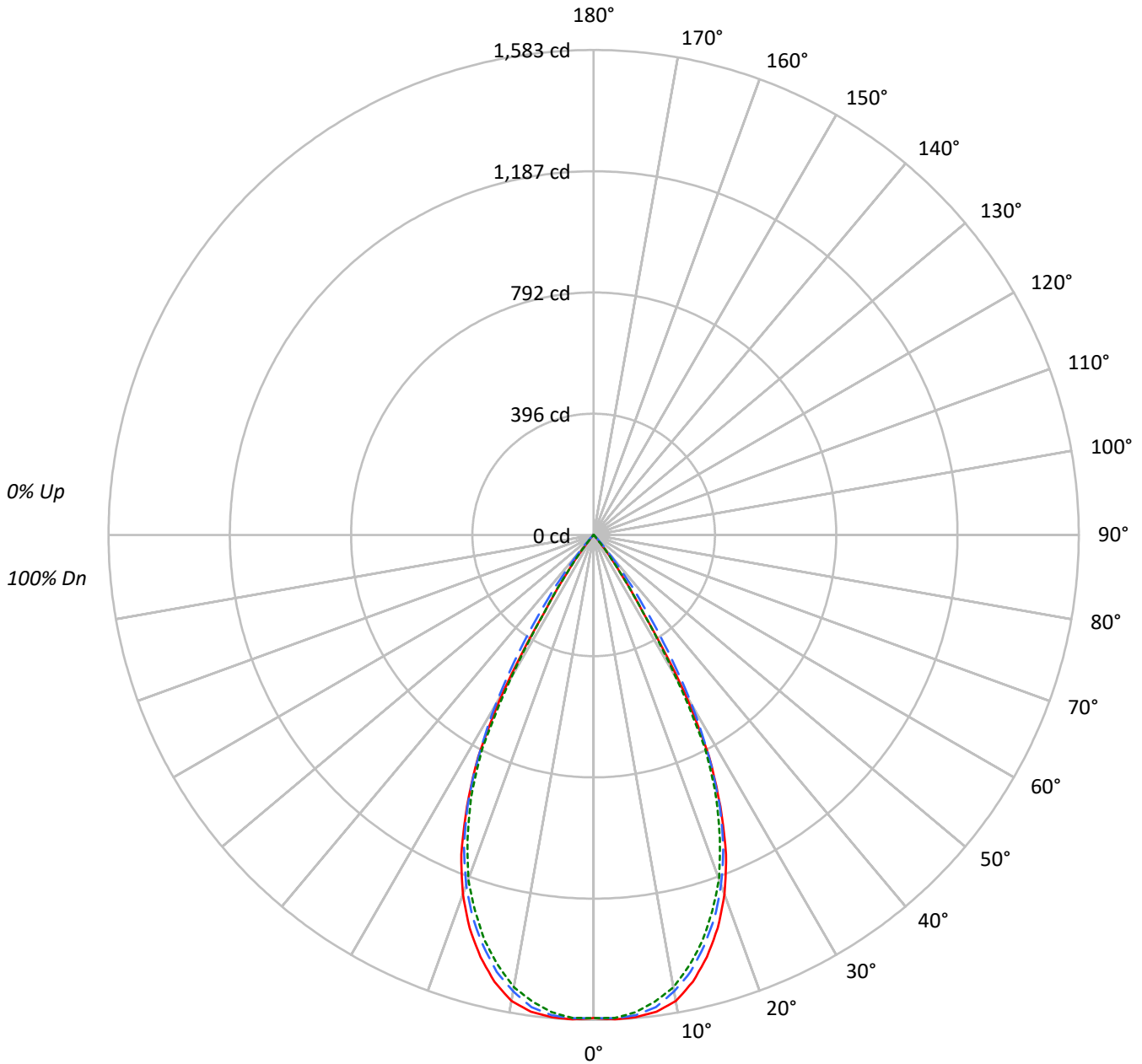
Lumens per Lamp: N/A
Luminaire Lumens: 1123.4 lumens
Efficiency: N/A
Efficacy: 63.8 lumens/watt
Spacing Criteria (0/90/45): 0.89 / 0.87 / 0.83
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 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



TEST NUMBER: P886936
CATALOG NUMBER: ML412LSFL95FS1E-TIR4D55WFL-TL4\$DMB-1020LM-3000K

Luminous Intensity Polar Plot





TEST NUMBER: P886936

CATALOG NUMBER: ML412LSFL95FS1E-TIR4D55WFL-TL4\$DMB-1020LM-3000K

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	63	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°	152782	152782	152782
5°	153677	153055	152111
10°	151962	148794	147437
15°	143038	139397	137542
20°	128660	125330	123247
25°	104507	103908	101150
30°	65786	71648	60104
35°	18035	33587	17846
40°	2555	7954	1834
45°	110	1767	110
50°	0	241	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: 1767 cd/sqm



TEST NUMBER: P886936

CATALOG NUMBER: ML412LSFL95FS1E-TIR4D55WFL-TL4\$DMB-1020LM-3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.4	13.2
10°-20°	388.3	34.6
20°-30°	430.8	38.3
30°-40°	149.1	13.3
40°-50°	6.8	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°	967.4	86.1
0°-40°	1116.5	99.4
0°-60°	1123.4	100.0
0°-90°	1123.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1123.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1577	1577	1577	1577	1577	
5°	1580	1578	1574	1567	1564	150
15°	1426	1413	1390	1376	1371	397
25°	978	971	972	953	946	436
35°	152	173	284	176	151	123
45°	1	2	13	2	1	3
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	0



TEST NUMBER: P886936

CATALOG NUMBER: ML412LSFL95FS1E-TIR4D55WFL-TL4SDMB-1020LM-3000K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1577.1	1577.1	1577.1	1577.1	1577.1
2.5°	1582.7	1580.3	1578.7	1577.9	1577.9
5°	1580.3	1577.9	1573.9	1566.6	1564.2
7.5°	1569.8	1561.8	1554.5	1543.2	1535.9
10°	1544.8	1534.3	1512.6	1502.1	1498.8
12.5°	1494.0	1481.9	1460.9	1444.8	1439.9
15°	1426.2	1413.3	1389.9	1376.2	1371.4
17.5°	1345.6	1335.9	1310.9	1292.3	1286.7
20°	1248.0	1233.4	1215.7	1199.6	1195.5
22.5°	1128.6	1115.7	1105.2	1085.0	1075.3
25°	977.7	971.3	972.1	952.7	946.3
27.5°	815.6	819.6	812.3	805.1	788.9
30°	588.1	642.1	640.5	613.1	537.3
32.5°	296.1	386.4	452.6	365.4	300.9
35°	152.5	172.6	284.0	175.9	150.9
37.5°	68.6	79.9	158.9	79.1	67.0
40°	20.2	33.1	62.9	32.3	14.5
42.5°	3.2	9.7	29.8	6.5	3.2
45°	0.8	2.4	12.9	2.4	0.8
47.5°	0.8	0.8	4.0	0.8	0.0
50°	0.0	0.0	1.6	0.0	0.0
52.5°	0.0	0.0	0.8	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



Report Generated By 670245859 / DESKTOP-T8S5UU9

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report





— 0°-180° - - 45°-225° - - - - 90°-270°

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



(END OF REPORT)