

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: P886935

Luminaire Tested: ML412LSFL95FS1E-TIR4D55WFL-TL4SDMB-1020LM-2700K

Issue Date: 7/10/2024

Test Information

Test Method: LM-79-2019
Report Number: P886935
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-2700K
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

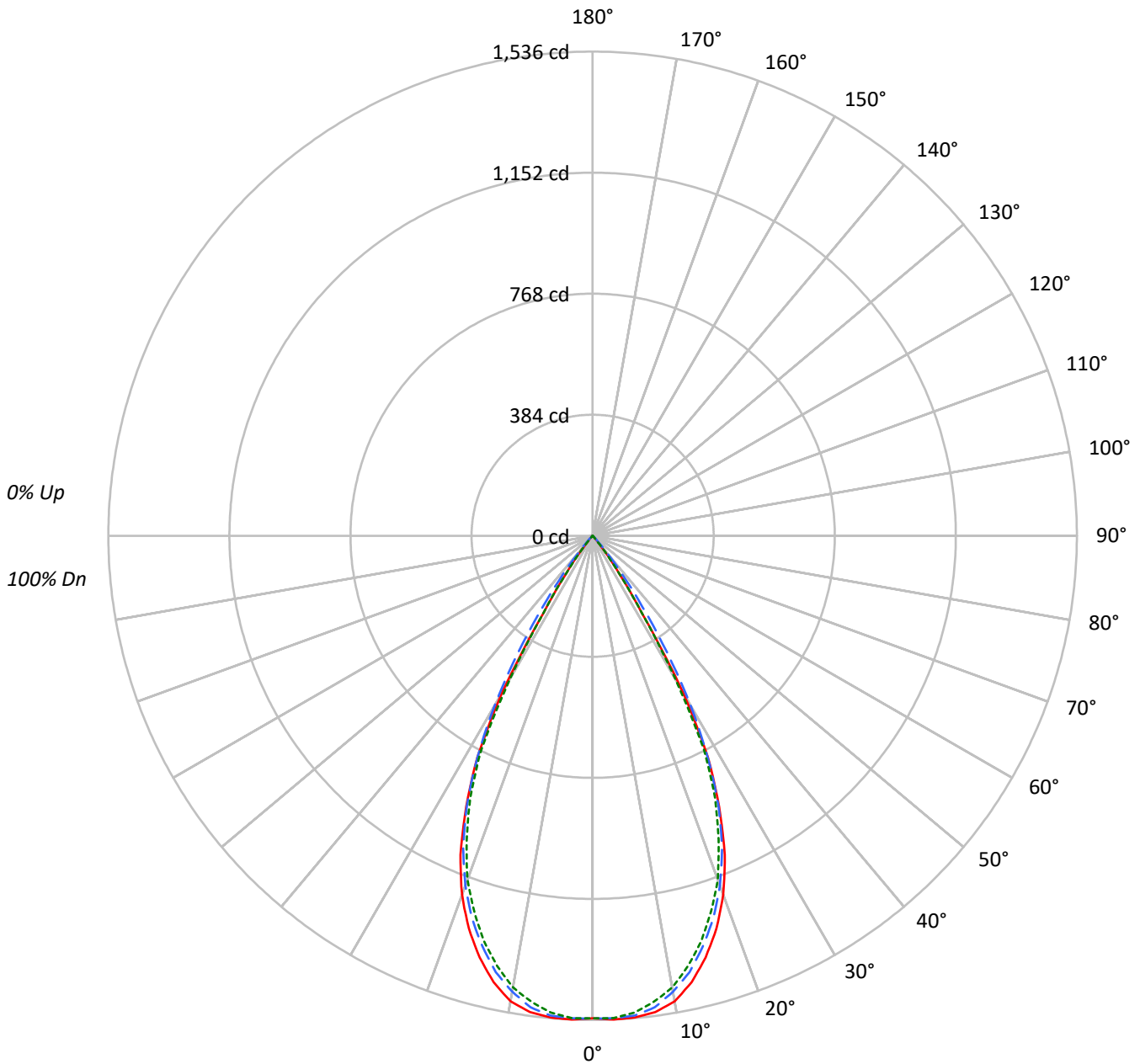
Lumens per Lamp: N/A
Luminaire Lumens: 1090.4 lumens
Efficiency: N/A
Efficacy: 62.0 lumens/watt
Spacing Criteria (0/90/45): 0.89 / 0.87 / 0.83
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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



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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	109	107	112	109	107	106	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	93	91	89																			
3	104	99	94	91	103	97	93	90	95	91	89	92	90	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	96	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	73	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	70	66	74	69	66	73	68	65	72	68	65	64																			
9	80	72	66	63	79	71	66	63	70	66	62	69	65	62	69	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°	148297	148297	148297
5°	149165	148562	147648
10°	147506	144427	143118
15°	138845	135315	133500
20°	124876	121649	119629
25°	101439	100851	98179
30°	63851	69545	58336
35°	17503	32593	17314
40°	2479	7727	1783
45°	110	1713	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: 1713 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	144.0	13.2
10°-20°	376.9	34.6
20°-30°	418.1	38.3
30°-40°	144.7	13.3
40°-50°	6.6	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°	939.0	86.1
0°-40°	1083.7	99.4
0°-60°	1090.4	100.0
0°-90°	1090.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1090.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1531	1531	1531	1531	1531	
5°	1534	1532	1528	1521	1518	145
15°	1384	1372	1349	1336	1331	385
25°	949	943	944	925	918	423
35°	148	168	276	171	146	119
45°	1	2	12	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	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1530.8	1530.8	1530.8	1530.8	1530.8
2.5°	1536.3	1533.9	1532.4	1531.6	1531.6
5°	1533.9	1531.6	1527.7	1520.6	1518.3
7.5°	1523.8	1515.9	1508.9	1497.9	1490.9
10°	1499.5	1489.3	1468.2	1458.0	1454.9
12.5°	1450.2	1438.4	1418.1	1402.4	1397.7
15°	1384.4	1371.9	1349.2	1335.8	1331.1
17.5°	1306.1	1296.7	1272.4	1254.4	1248.9
20°	1211.3	1197.2	1180.0	1164.4	1160.4
22.5°	1095.5	1082.9	1072.7	1053.2	1043.8
25°	949.0	942.8	943.5	924.8	918.5
27.5°	791.6	795.6	788.5	781.5	765.8
30°	570.8	623.3	621.7	595.1	521.5
32.5°	287.4	375.1	439.3	354.7	292.1
35°	148.0	167.6	275.6	170.7	146.4
37.5°	66.6	77.5	154.3	76.7	65.0
40°	19.6	32.1	61.1	31.3	14.1
42.5°	3.1	9.4	29.0	6.3	3.1
45°	0.8	2.3	12.5	2.3	0.8
47.5°	0.8	0.8	3.9	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



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Scaled Data Report





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

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