

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: P886939

Luminaire Tested: ML412LSFL95FS1E-TIR4D55WFL-TL4SDMB-1020LM-5000K

Issue Date: 7/10/2024

Test Information

Test Method: LM-79-2019
Report Number: P886939
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-5000K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 5000K CCT
Ballast/Driver: -

Summary

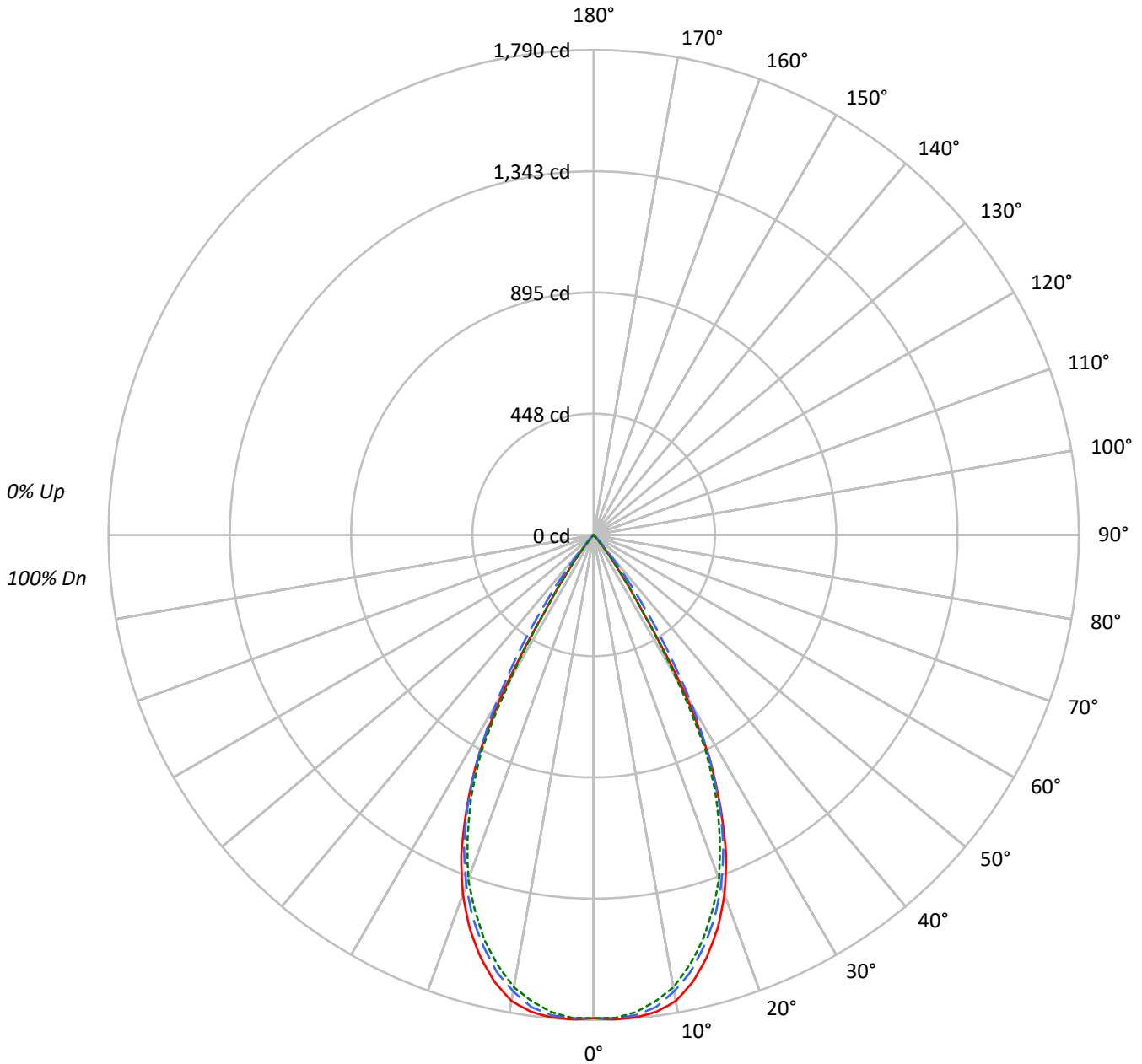
Lumens per Lamp: N/A
Luminaire Lumens: 1270.3 lumens
Efficiency: N/A
Efficacy: 72.2 lumens/watt
Spacing Criteria (0/90/45): 0.89 / 0.87 / 0.83
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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°	172768	172768	172768
5°	173787	173078	172008
10°	171852	168262	166737
15°	161762	157640	155534
20°	145484	141732	139381
25°	118178	117504	114383
30°	74388	81022	67967
35°	20389	37974	20176
40°	2883	9004	2074
45°	123	2000	123
50°	0	271	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: 2000 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	167.8	13.2
10°-20°	439.1	34.6
20°-30°	487.1	38.3
30°-40°	168.6	13.3
40°-50°	7.7	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°	1094.0	86.1
0°-40°	1262.5	99.4
0°-60°	1270.3	100.0
0°-90°	1270.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1270.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1783	1783	1783	1783	1783	
5°	1787	1784	1780	1772	1769	169
15°	1613	1598	1572	1556	1551	449
25°	1106	1098	1099	1077	1070	493
35°	172	195	321	199	171	139
45°	1	3	15	3	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°	1783.4	1783.4	1783.4	1783.4	1783.4
2.5°	1789.8	1787.1	1785.3	1784.4	1784.4
5°	1787.1	1784.4	1779.8	1771.6	1768.8
7.5°	1775.2	1766.1	1757.9	1745.1	1736.9
10°	1747.0	1735.1	1710.5	1698.6	1695.0
12.5°	1689.5	1675.8	1652.1	1633.8	1628.4
15°	1612.9	1598.3	1571.8	1556.3	1550.8
17.5°	1521.6	1510.7	1482.4	1461.4	1455.0
20°	1411.2	1394.8	1374.8	1356.5	1352.0
22.5°	1276.2	1261.6	1249.8	1227.0	1216.0
25°	1105.6	1098.3	1099.3	1077.4	1070.1
27.5°	922.3	926.8	918.6	910.4	892.2
30°	665.0	726.1	724.3	693.3	607.6
32.5°	334.8	437.0	511.8	413.2	340.3
35°	172.4	195.2	321.1	198.9	170.6
37.5°	77.5	90.3	179.7	89.4	75.7
40°	22.8	37.4	71.2	36.5	16.4
42.5°	3.6	10.9	33.8	7.3	3.6
45°	0.9	2.7	14.6	2.7	0.9
47.5°	0.9	0.9	4.6	0.9	0.0
50°	0.0	0.0	1.8	0.0	0.0
52.5°	0.0	0.0	0.9	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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