

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: P886945

Luminaire Tested: ML412LSFL95FS1E-TIR4D55WFL-TL4SDSL-1020LM-2700K

Issue Date: 7/10/2024

Test Information

Test Method: LM-79-2019
Report Number: P886945
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-2700K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 55D TIR, METALLIC SILVER TRIM
Light Source: (1) HCL SELECTABLE LUMEN LED 95CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1128.8 lumens
Efficiency: N/A
Efficacy: 64.1 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

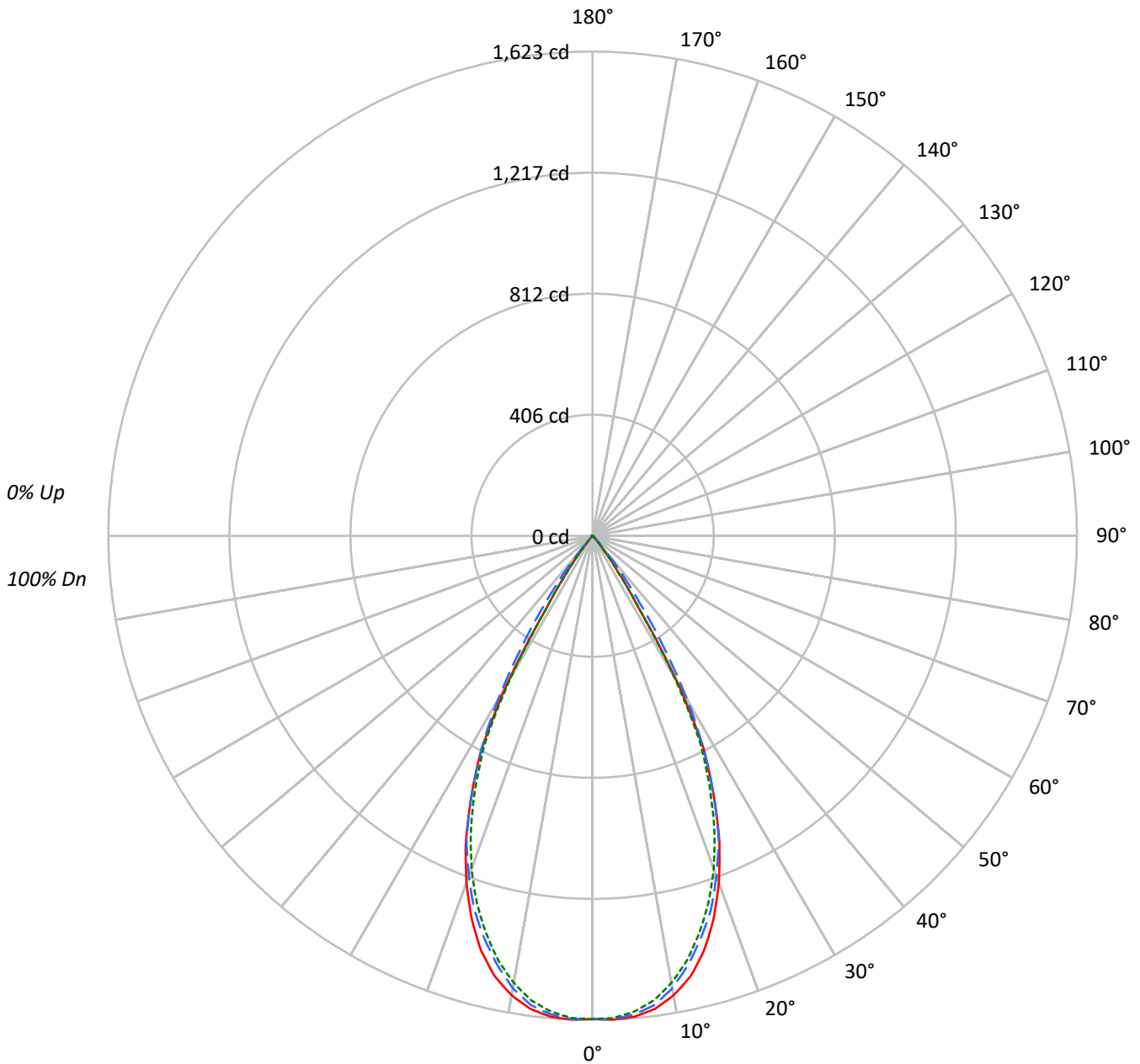
Input Watts (W): 17.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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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°	156890	156890	156890
5°	157333	156575	155661
10°	153841	151450	149680
15°	144522	140280	138324
20°	127495	125000	122330
25°	102572	102657	99226
30°	64354	70753	61468
35°	17680	32771	17586
40°	3073	7524	2175
45°	644	1932	534
50°	467	467	467
55°	388	388	388
60°	310	310	310
65°	183	367	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: 1932 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.6	13.4
10°-20°	390.7	34.6
20°-30°	426.7	37.8
30°-40°	147.0	13.0
40°-50°	8.6	0.8
50°-60°	1.9	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°	969.1	85.9
0°-40°	1116.0	98.9
0°-60°	1126.5	99.8
0°-90°	1128.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1128.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1620	1620	1620	1620	1620	
5°	1618	1616	1610	1608	1601	153
15°	1441	1424	1399	1388	1379	399
25°	960	964	960	943	928	429
35°	150	171	277	169	149	121
45°	5	6	14	5	4	5
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°	1619.5	1619.5	1619.5	1619.5	1619.5
2.5°	1623.4	1620.3	1621.8	1621.0	1617.9
5°	1617.9	1616.4	1610.1	1608.5	1600.7
7.5°	1599.9	1597.6	1586.6	1578.0	1571.0
10°	1563.9	1553.7	1539.6	1524.8	1521.6
12.5°	1513.8	1499.7	1474.7	1459.0	1459.0
15°	1441.0	1423.8	1398.7	1387.8	1379.2
17.5°	1347.1	1337.7	1316.6	1297.8	1290.7
20°	1236.7	1235.9	1212.5	1196.0	1186.6
22.5°	1109.9	1108.4	1104.4	1083.3	1066.1
25°	959.6	964.3	960.4	943.2	928.3
27.5°	807.0	811.7	808.6	785.9	779.6
30°	575.3	623.8	632.5	600.4	549.5
32.5°	288.0	372.6	448.5	362.4	286.5
35°	149.5	171.4	277.1	169.1	148.7
37.5°	70.4	83.8	158.9	82.2	68.9
40°	24.3	35.2	59.5	35.2	17.2
42.5°	6.3	12.5	30.5	9.4	7.0
45°	4.7	5.5	14.1	4.7	3.9
47.5°	3.1	3.1	6.3	3.1	3.1
50°	3.1	2.3	3.1	2.3	3.1
52.5°	2.3	2.3	2.3	2.3	2.3
55°	2.3	2.3	2.3	2.3	2.3
57.5°	1.6	1.6	1.6	1.6	1.6
60°	1.6	1.6	1.6	1.6	1.6
62.5°	1.6	1.6	1.6	1.6	1.6
65°	0.8	1.6	1.6	1.6	0.8
67.5°	0.8	0.8	1.6	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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