

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: P886882

Luminaire Tested: ML412LSFL95FS1E-TIR4D25NFL-TL4SDMW-1020LM-3500K

Issue Date: 7/9/2024

Test Information

Test Method: LM-79-2019
Report Number: P886882
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-48)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/9/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL95FS1E-TIR4D25NFL-TL4SDMW-1020LM-3500K
Description: 4IN SQUARE ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

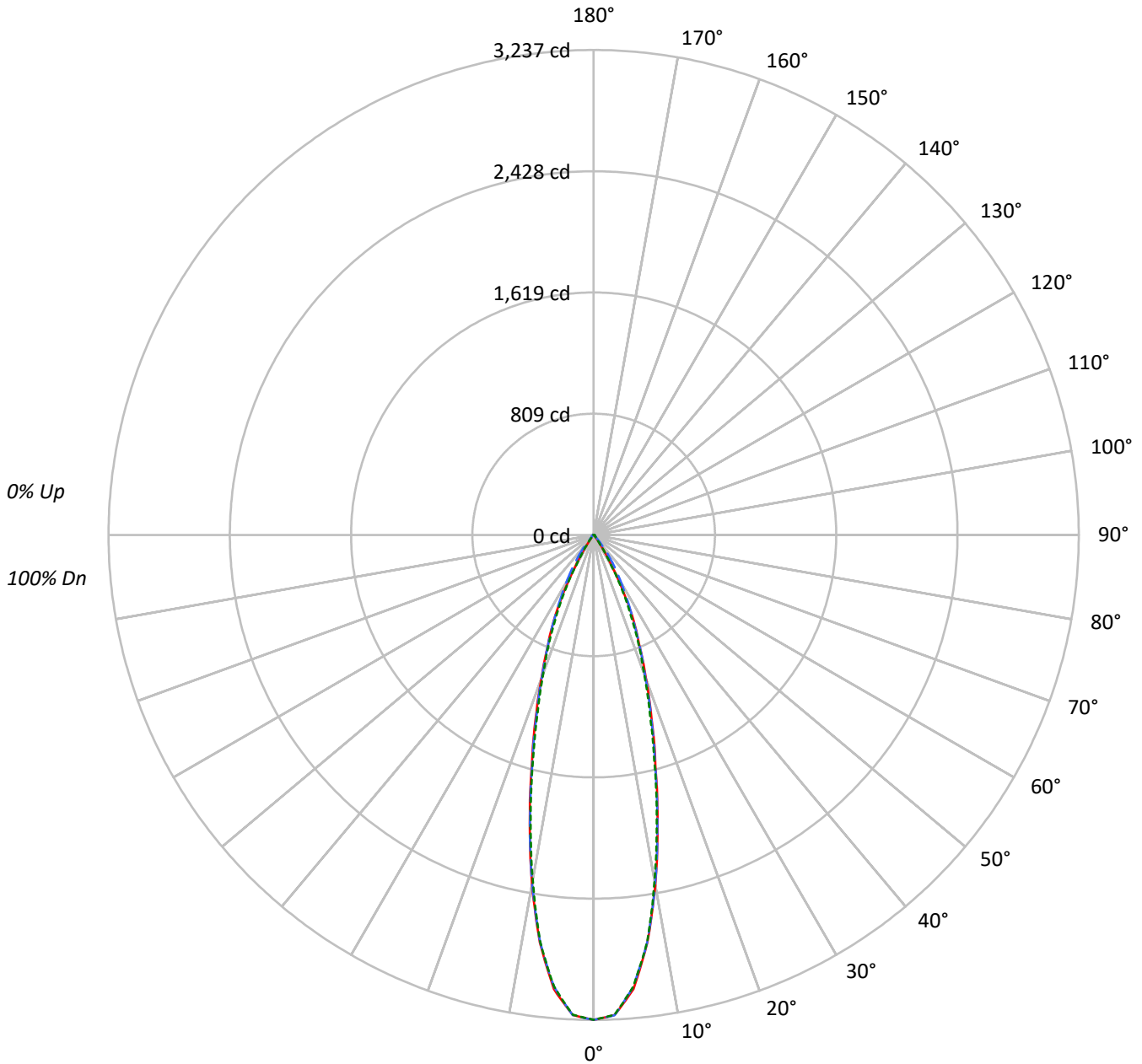
Lumens per Lamp: N/A
Luminaire Lumens: 1115.8 lumens
Efficiency: N/A
Efficacy: 63.4 lumens/watt
Spacing Criteria (0/90/45): 0.49 / 0.49 / 0.52
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

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			100																
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95			95																
2	110	105	102	99	108	104	101	98	101	98	96	98	96	94	95	93	92	90			90																
3	105	100	96	92	104	99	95	92	96	93	90	94	91	89	92	89	88	86			86																
4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	86	84	82			82																
5	98	91	86	82	96	90	85	82	88	84	81	87	83	81	85	82	80	79			79																
6	94	87	82	78	93	86	81	78	85	81	78	83	80	77	82	79	77	75			75																
7	91	83	78	75	89	82	78	75	81	77	74	80	77	74	79	76	73	72			72																
8	87	80	75	72	86	79	75	71	78	74	71	77	74	71	76	73	71	69			69																
9	85	77	72	69	84	76	72	69	75	71	68	75	71	68	74	70	68	67			67																
10	82	74	69	66	81	74	69	66	73	69	66	72	68	66	71	68	65	64			64																

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	313547	313547	313547
5°	295996	294459	294372
10°	233097	232527	230392
15°	159837	158663	157069
20°	105031	103649	101247
25°	67245	66261	61537
30°	28939	40606	26041
35°	7995	22399	7592
40°	2845	8233	2744
45°	2178	2973	2055
50°	2020	2261	1884
55°	1976	2111	1976
60°	1938	2093	1938
65°	1903	2109	1903
70°	1898	2124	1898
75°	1871	2171	1871
80°	1841	2343	1841
85°	1890	1890	1890

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 2973 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	267.9	24.0
10°-20°	440.9	39.5
20°-30°	281.9	25.3
30°-40°	82.2	7.4
40°-50°	15.4	1.4
50°-60°	10.7	1.0
60°-70°	8.8	0.8
70°-80°	5.9	0.5
80°-90°	2.0	0.2
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°	990.7	88.8
0°-40°	1073.0	96.2
0°-60°	1099.0	98.5
0°-90°	1115.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1115.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3237	3237	3237	3237	3237	
5°	3044	3040	3028	3029	3027	268
15°	1594	1588	1582	1571	1566	444
25°	629	626	620	605	576	280
35°	68	108	189	99	64	57
45°	16	17	22	17	15	13
55°	12	12	12	12	12	10
65°	8	9	9	9	8	8
75°	5	6	6	6	5	5
85°	2	2	2	2	2	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3236.6	3236.6	3236.6	3236.6	3236.6
2.5°	3207.4	3210.7	3209.0	3199.9	3204.9
5°	3043.8	3040.5	3028.0	3028.8	3027.1
7.5°	2745.1	2744.3	2740.1	2741.8	2736.8
10°	2369.6	2386.3	2363.8	2363.8	2342.1
12.5°	1970.8	1975.0	1965.0	1953.3	1943.3
15°	1593.7	1587.8	1582.0	1571.1	1566.1
17.5°	1288.3	1287.5	1273.3	1259.9	1241.6
20°	1018.8	1016.3	1005.4	1000.4	982.1
22.5°	799.3	809.4	797.7	778.5	773.5
25°	629.1	625.8	619.9	604.9	575.7
27.5°	436.4	471.4	478.1	450.6	404.7
30°	258.7	313.7	363.0	299.5	232.8
32.5°	145.2	193.6	273.7	180.2	125.2
35°	67.6	107.6	189.4	99.3	64.2
37.5°	30.9	52.6	115.1	51.7	33.4
40°	22.5	26.7	65.1	28.4	21.7
42.5°	18.4	20.0	36.7	20.0	17.5
45°	15.9	16.7	21.7	16.7	15.0
47.5°	13.4	15.0	16.7	14.2	13.4
50°	13.4	13.4	15.0	13.4	12.5
52.5°	12.5	12.5	13.4	12.5	12.5
55°	11.7	11.7	12.5	11.7	11.7
57.5°	10.8	10.8	11.7	10.8	10.8
60°	10.0	10.8	10.8	10.0	10.0
62.5°	9.2	10.0	10.0	10.0	9.2
65°	8.3	9.2	9.2	9.2	8.3
67.5°	7.5	8.3	8.3	8.3	7.5
70°	6.7	7.5	7.5	7.5	6.7
72.5°	5.8	6.7	6.7	6.7	5.8
75°	5.0	5.8	5.8	5.8	5.0
77.5°	4.2	5.0	5.0	5.0	4.2
80°	3.3	4.2	4.2	4.2	3.3
82.5°	2.5	2.5	2.5	3.3	2.5
85°	1.7	1.7	1.7	1.7	1.7
87.5°	0.8	0.8	0.8	0.8	0.8
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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