

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: P887122

Luminaire Tested: ML412LSFLD2W1E-TIR4D55WFL-TL4SDMB-600LM-2700K

Issue Date: 7/10/2024

Test Information

Test Method: LM-79-2019
Report Number: P887122
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: ML412LSFLD2W1E-TIR4D55WFL-TL4SDMB-600LM-2700K
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

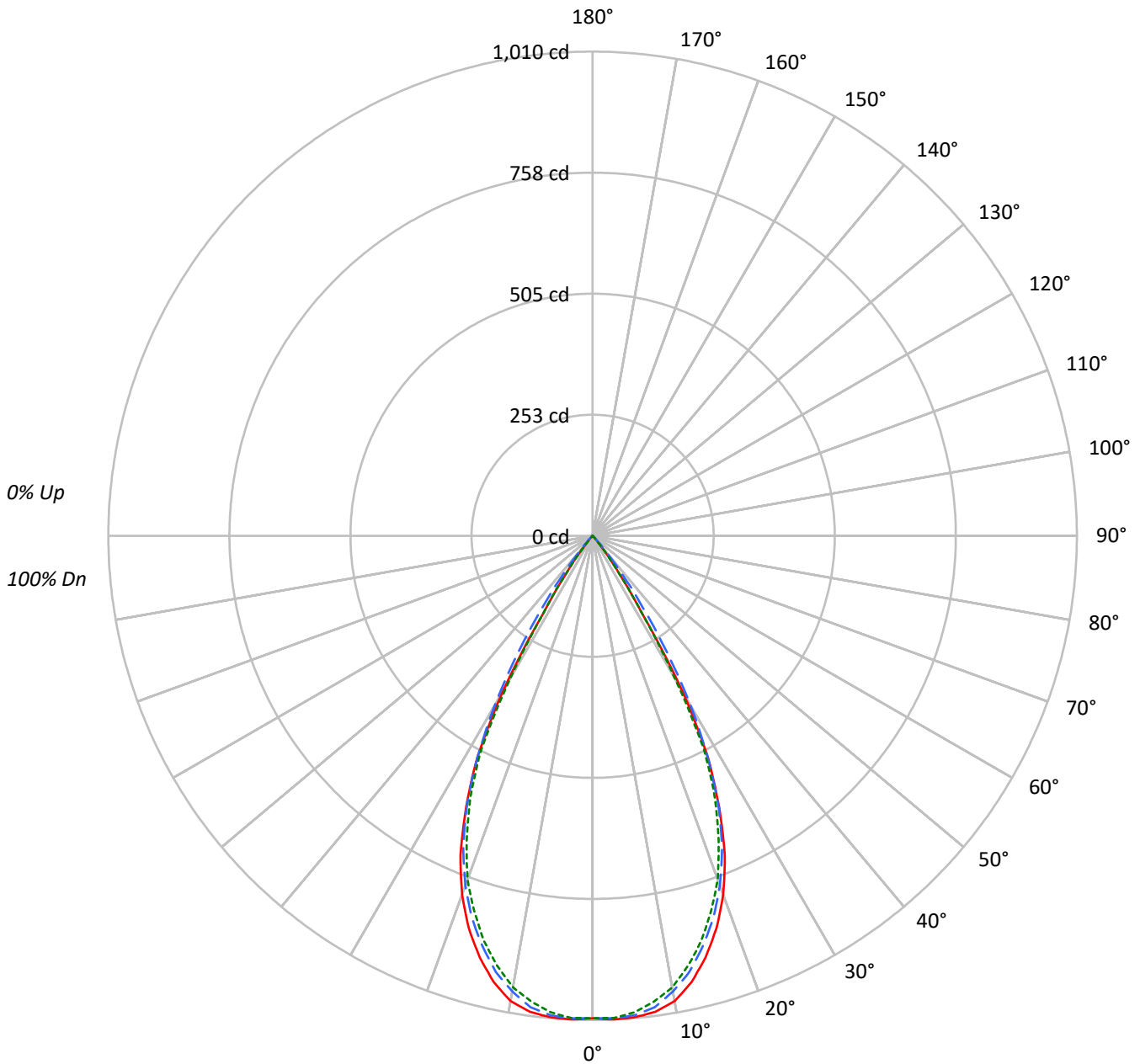
Lumens per Lamp: N/A
Luminaire Lumens: 716.8 lumens
Efficiency: N/A
Efficacy: 76.3 lumens/watt
Spacing Criteria (0/90/45): 0.89 / 0.87 / 0.83
Luminous Opening: Rectangular (W 0.33' x L: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 9.4
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	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°	97486	97486	97486
5°	98053	97654	97051
10°	96963	94937	94071
15°	91266	88950	87756
20°	82093	79969	78639
25°	66678	66293	64540
30°	41971	45718	38346
35°	11507	21429	11389
40°	1631	5071	1176
45°	69	1123	69
50°	0	151	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: 1123 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.7	13.2
10°-20°	247.7	34.6
20°-30°	274.9	38.3
30°-40°	95.1	13.3
40°-50°	4.3	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°	617.3	86.1
0°-40°	712.4	99.4
0°-60°	716.8	100.0
0°-90°	716.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	716.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1006	1006	1006	1006	1006	
5°	1008	1007	1004	1000	998	96
15°	910	902	887	878	875	253
25°	624	620	620	608	604	278
35°	97	110	181	112	96	78
45°	0	2	8	2	0	2
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°	1006.3	1006.3	1006.3	1006.3	1006.3
2.5°	1009.9	1008.3	1007.3	1006.8	1006.8
5°	1008.3	1006.8	1004.2	999.6	998.0
7.5°	1001.6	996.5	991.9	984.6	980.0
10°	985.7	979.0	965.1	958.4	956.3
12.5°	953.3	945.5	932.1	921.9	918.8
15°	910.0	901.8	886.9	878.1	875.0
17.5°	858.5	852.4	836.4	824.6	821.0
20°	796.3	787.0	775.7	765.4	762.8
22.5°	720.1	711.9	705.2	692.3	686.1
25°	623.8	619.7	620.2	607.9	603.8
27.5°	520.4	523.0	518.3	513.7	503.4
30°	375.2	409.7	408.7	391.2	342.8
32.5°	188.9	246.5	288.8	233.2	192.0
35°	97.3	110.1	181.2	112.2	96.3
37.5°	43.8	51.0	101.4	50.4	42.7
40°	12.9	21.1	40.1	20.6	9.3
42.5°	2.1	6.2	19.0	4.1	2.1
45°	0.5	1.5	8.2	1.5	0.5
47.5°	0.5	0.5	2.6	0.5	0.0
50°	0.0	0.0	1.0	0.0	0.0
52.5°	0.0	0.0	0.5	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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