

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: P887053

Luminaire Tested: ML412LSFL9FS1E-TIR4D55WFL-TL4RDMB-1200LM-4000K

Issue Date: 7/9/2024

Test Information

Test Method: LM-79-2019
Report Number: P887053
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-44)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/9/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL9FS1E-TIR4D55WFL-TL4RDMB-1200LM-4000K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

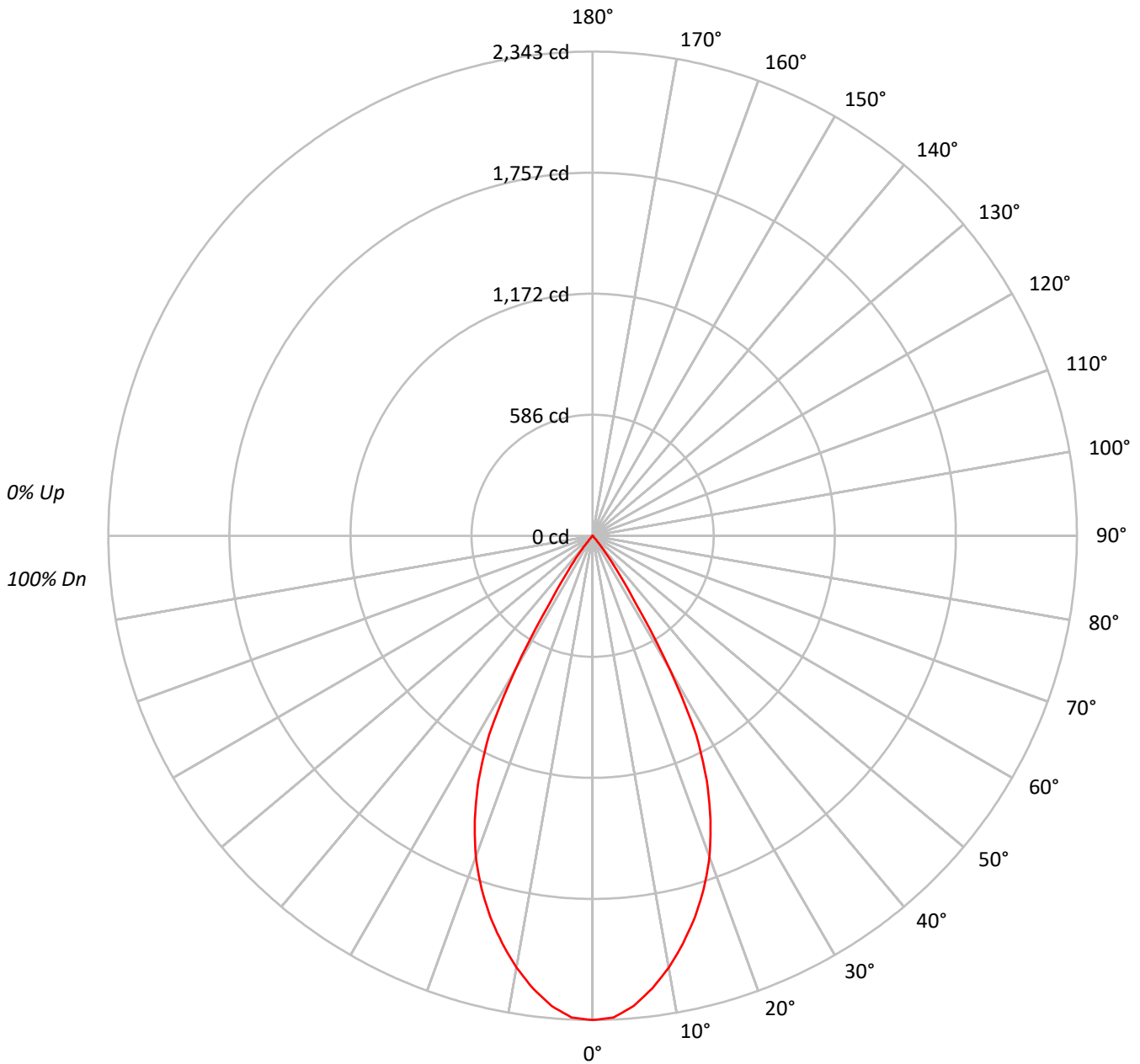
Lumens per Lamp: N/A
Luminaire Lumens: 1485.6 lumens
Efficiency: N/A
Efficacy: 84.4 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 0.83 / 0.79
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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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CATALOG NUMBER: ML412LSFL9FS1E-TIR4D55WFL-TL4RDDB-1200LM-4000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	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	110	108	106	106	104	103	102	101	99	98	97	97	95			
2	109	105	102	99	107	103	100	97	100	98	95	97	95	93	95	93	91	90			
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	86	85			
4	100	94	89	85	99	93	88	85	91	87	84	89	85	83	87	84	82	80			
5	96	89	84	80	95	88	83	80	86	82	79	85	81	78	83	80	78	76			
6	92	84	79	75	91	84	79	75	82	78	75	81	77	74	80	76	74	72			
7	88	80	75	71	87	79	74	71	78	74	71	77	73	70	76	73	70	69			
8	85	76	71	67	84	76	71	67	75	70	67	74	70	67	73	69	66	65			
9	81	73	67	64	80	72	67	64	71	67	64	71	66	63	70	66	63	62			
10	78	69	64	61	77	69	64	61	68	64	61	68	63	60	67	63	60	59			

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	288999
5°	282711
10°	265740
15°	244080
20°	216897
25°	177742
30°	106407
35°	29829
40°	5169
45°	192
50°	0
55°	0
60°	0
65°	0
70°	0
75°	0
80°	0
85°	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 47.5°
 Luminance: 201 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.7	14.3
10°-20°	532.4	35.8
20°-30°	576.3	38.8
30°-40°	160.1	10.8
40°-50°	4.2	0.3
50°-60°	0.0	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°	1321.4	88.9
0°-40°	1481.5	99.7
0°-60°	1485.6	100.0
0°-90°	1485.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1485.6	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2343	
5°	2283	213
15°	1911	532
25°	1306	576
35°	198	160
45°	1	4
55°	0	0
65°	0	0
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

	0°
0°	2343.0
2.5°	2333.1
5°	2283.3
7.5°	2209.1
10°	2121.7
12.5°	2019.9
15°	1911.4
17.5°	1789.7
20°	1652.4
22.5°	1489.7
25°	1306.0
27.5°	1085.7
30°	747.1
32.5°	389.6
35°	198.1
37.5°	94.1
40°	32.1
42.5°	4.4
45°	1.1
47.5°	1.1
50°	0.0
52.5°	0.0
55°	0.0
57.5°	0.0
60°	0.0
62.5°	0.0
65°	0.0
67.5°	0.0
70°	0.0
72.5°	0.0
75°	0.0
77.5°	0.0
80°	0.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269

Scaled Data Report



Report Generated By 670245859 / DESKTOP-T8S5UU9

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— 0°-180°

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