

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: P887058

Luminaire Tested: ML412LSFL9FS1E-TIR4D55WFL-TL4RDMW-1200LM-4000K

Issue Date: 7/9/2024

Test Information

Test Method: LM-79-2019
Report Number: P887058
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-42)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/9/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL9FS1E-TIR4D55WFL-TL4RDMW-1200LM-4000K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

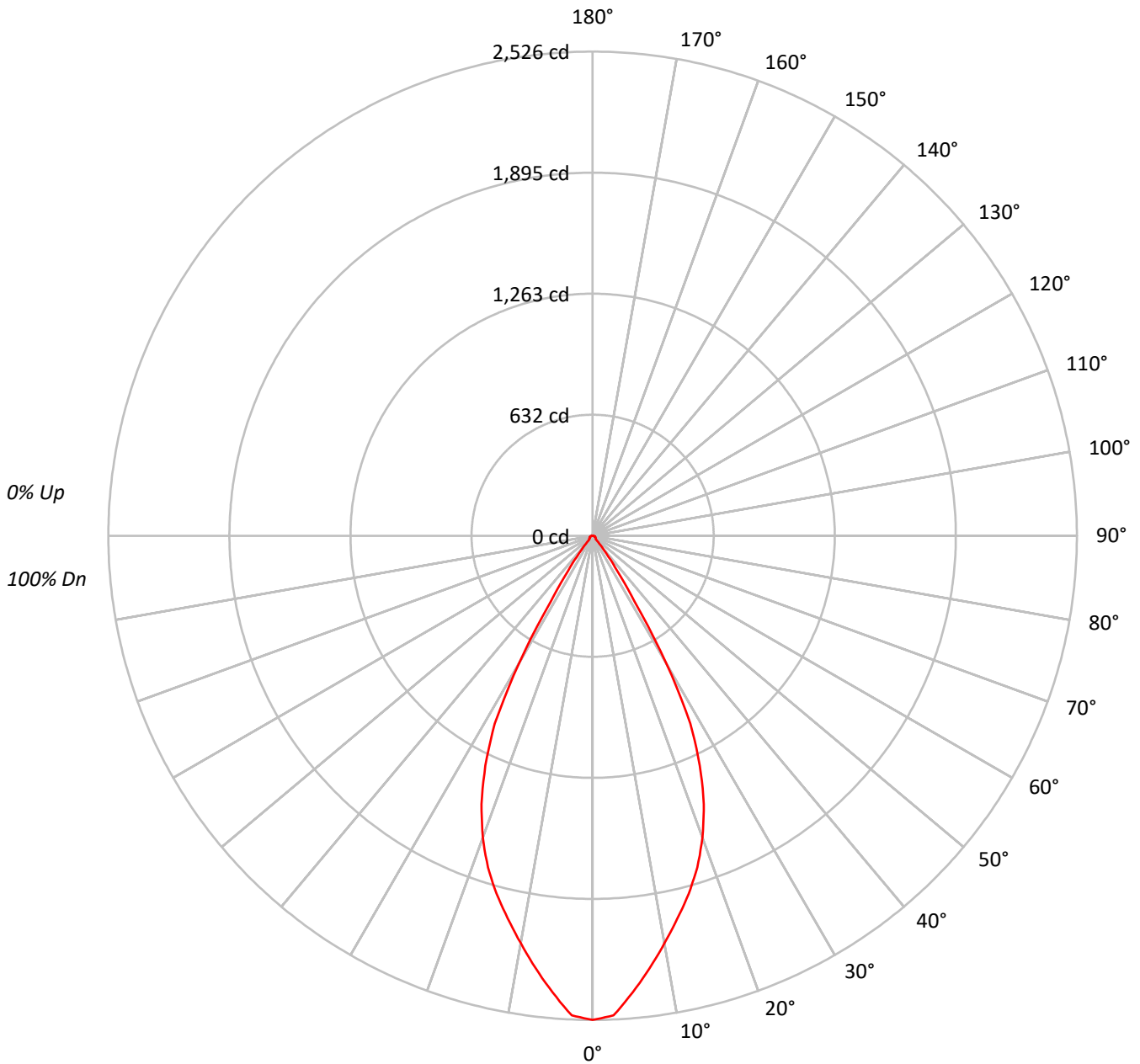
Lumens per Lamp: N/A
Luminaire Lumens: 1587.4 lumens
Efficiency: N/A
Efficacy: 90.2 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 0.79 / 0.78
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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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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	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94			
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88			
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	85	83			
4	99	92	87	83	97	91	86	83	89	85	82	87	83	81	85	82	80	78			
5	95	87	82	78	93	86	81	77	84	80	77	83	79	76	81	78	75	74			
6	91	82	77	73	89	82	76	73	80	76	72	79	75	72	78	74	71	70			
7	87	78	73	69	85	78	72	69	76	72	68	75	71	68	74	70	68	66			
8	83	74	69	65	82	74	69	65	73	68	65	72	67	64	71	67	64	63			
9	80	71	65	62	79	70	65	62	69	65	61	69	64	61	68	64	61	60			
10	76	67	62	59	75	67	62	59	66	62	58	66	61	58	65	61	58	57			

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	311534
5°	296157
10°	270361
15°	246978
20°	219903
25°	180151
30°	109626
35°	33473
40°	8727
45°	4047
50°	4241
55°	4279
60°	4366
65°	4524
70°	4400
75°	4766
80°	4688
85°	4670

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 75°
 Luminance: 4766 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	221.1	13.9
10°-20°	539.6	34.0
20°-30°	586.0	36.9
30°-40°	173.6	10.9
40°-50°	21.0	1.3
50°-60°	17.8	1.1
60°-70°	14.9	0.9
70°-80°	10.1	0.6
80°-90°	3.3	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°	1346.6	84.8
0°-40°	1520.2	95.8
0°-60°	1559.1	98.2
0°-90°	1587.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1587.4	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2526	
5°	2392	221
15°	1934	540
25°	1324	586
35°	222	174
45°	23	21
55°	20	18
65°	16	15
75°	10	10
85°	3	3
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	2525.7
2.5°	2504.7
5°	2391.9
7.5°	2275.8
10°	2158.6
12.5°	2044.7
15°	1934.1
17.5°	1814.7
20°	1675.3
22.5°	1515.0
25°	1323.7
27.5°	1104.7
30°	769.7
32.5°	406.9
35°	222.3
37.5°	116.1
40°	54.2
42.5°	26.5
45°	23.2
47.5°	22.1
50°	22.1
52.5°	21.0
55°	19.9
57.5°	18.8
60°	17.7
62.5°	16.6
65°	15.5
67.5°	13.3
70°	12.2
72.5°	11.1
75°	10.0
77.5°	7.7
80°	6.6
82.5°	4.4
85°	3.3
87.5°	1.1
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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