

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: P887106

Luminaire Tested: ML412LSFLD2W1E-TIR4D40FL-TL4RDMW-600LM-2700K

Issue Date: 7/9/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P887106  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-39)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 7/9/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: HALO  
Catalog Number: ML412LSFLD2W1E-TIR4D40FL-TL4RDMW-600LM-2700K  
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE TRIM  
Light Source: (1) D2W LED 90CRI / 2700K CCT  
Ballast/Driver: -

**Summary**

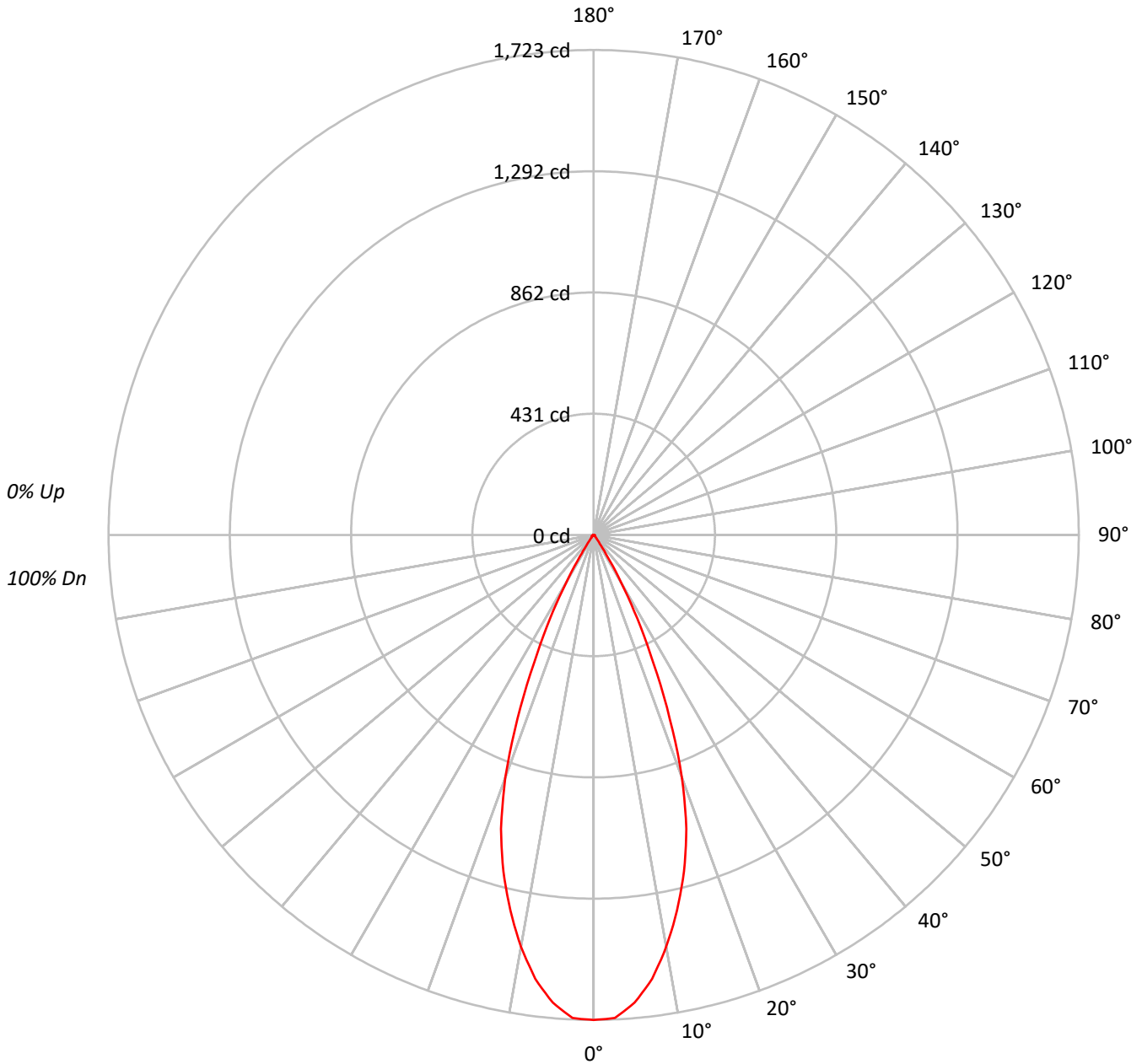
Lumens per Lamp: N/A  
Luminaire Lumens: 784.7 lumens  
Efficiency: N/A  
Efficacy: 83.5 lumens/watt  
Spacing Criteria (0/90/45): 0.67 / 0.67 / 0.64  
Luminous Opening: Circular (Dia: 0.33' x H: 0')  
CIE Type: Direct

Input Watts (W): 9.4  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	100	100	100
1	114	112	110	108	112	110	108	106	106	104	103	102	101	100	99	98	97	95	95	95	95
2	110	106	102	99	108	104	101	98	101	98	96	98	96	94	95	93	92	90	90	90	90
3	105	100	96	92	104	99	95	92	96	93	90	94	91	89	92	89	88	86	86	86	86
4	101	95	90	87	100	94	90	86	92	88	85	90	87	84	88	86	83	82	82	82	82
5	97	91	86	82	96	90	85	82	88	84	81	86	83	80	85	82	80	78	78	78	78
6	94	87	82	78	93	86	81	78	84	80	77	83	80	77	82	79	76	75	75	75	75
7	90	83	78	74	89	82	78	74	81	77	74	80	76	73	79	76	73	72	72	72	72
8	87	79	74	71	86	79	74	71	78	74	71	77	73	70	76	73	70	69	69	69	69
9	84	76	71	68	83	76	71	68	75	71	68	74	70	68	73	70	67	66	66	66	66
10	81	73	69	65	80	73	68	65	72	68	65	71	68	65	71	67	65	64	64	64	64

**AVERAGE LUMINANCE (cd/sqm):**

	0°
0°	212574
5°	206564
10°	186057
15°	158127
20°	120301
25°	68116
30°	27503
35°	5511
40°	1997
45°	1430
50°	1382
55°	1441
60°	1529
65°	1488
70°	1479
75°	1477
80°	1492
85°	1415

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 57.5°  
 Luminance: 1538 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	153.4	19.6
10°-20°	339.3	43.2
20°-30°	232.7	29.7
30°-40°	37.0	4.7
40°-50°	6.7	0.9
50°-60°	6.1	0.8
60°-70°	5.1	0.6
70°-80°	3.3	0.4
80°-90°	1.1	0.1
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°	725.3	92.4
0°-40°	762.4	97.2
0°-60°	775.2	98.8
0°-90°	784.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	784.7	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1723	
5°	1668	153
15°	1238	339
25°	500	233
35°	37	37
45°	8	7
55°	7	6
65°	5	5
75°	3	3
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	1723.4
2.5°	1718.2
5°	1668.3
7.5°	1590.5
10°	1485.5
12.5°	1367.1
15°	1238.3
17.5°	1094.7
20°	916.5
22.5°	706.4
25°	500.5
27.5°	334.7
30°	193.1
32.5°	89.1
35°	36.6
37.5°	20.1
40°	12.4
42.5°	9.3
45°	8.2
47.5°	7.7
50°	7.2
52.5°	7.2
55°	6.7
57.5°	6.7
60°	6.2
62.5°	5.7
65°	5.1
67.5°	4.6
70°	4.1
72.5°	3.6
75°	3.1
77.5°	2.6
80°	2.1
82.5°	1.5
85°	1.0
87.5°	0.5
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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(END OF REPORT)