

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: P887025

Luminaire Tested: ML412LSFL9FS1E-TIR4D40FL-TL4RDMW-1200LM-2700K

Issue Date: 7/9/2024

Test Information

Test Method: LM-79-2019
Report Number: P887025
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: ML412LSFL9FS1E-TIR4D40FL-TL4RDMW-1200LM-2700K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 40D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

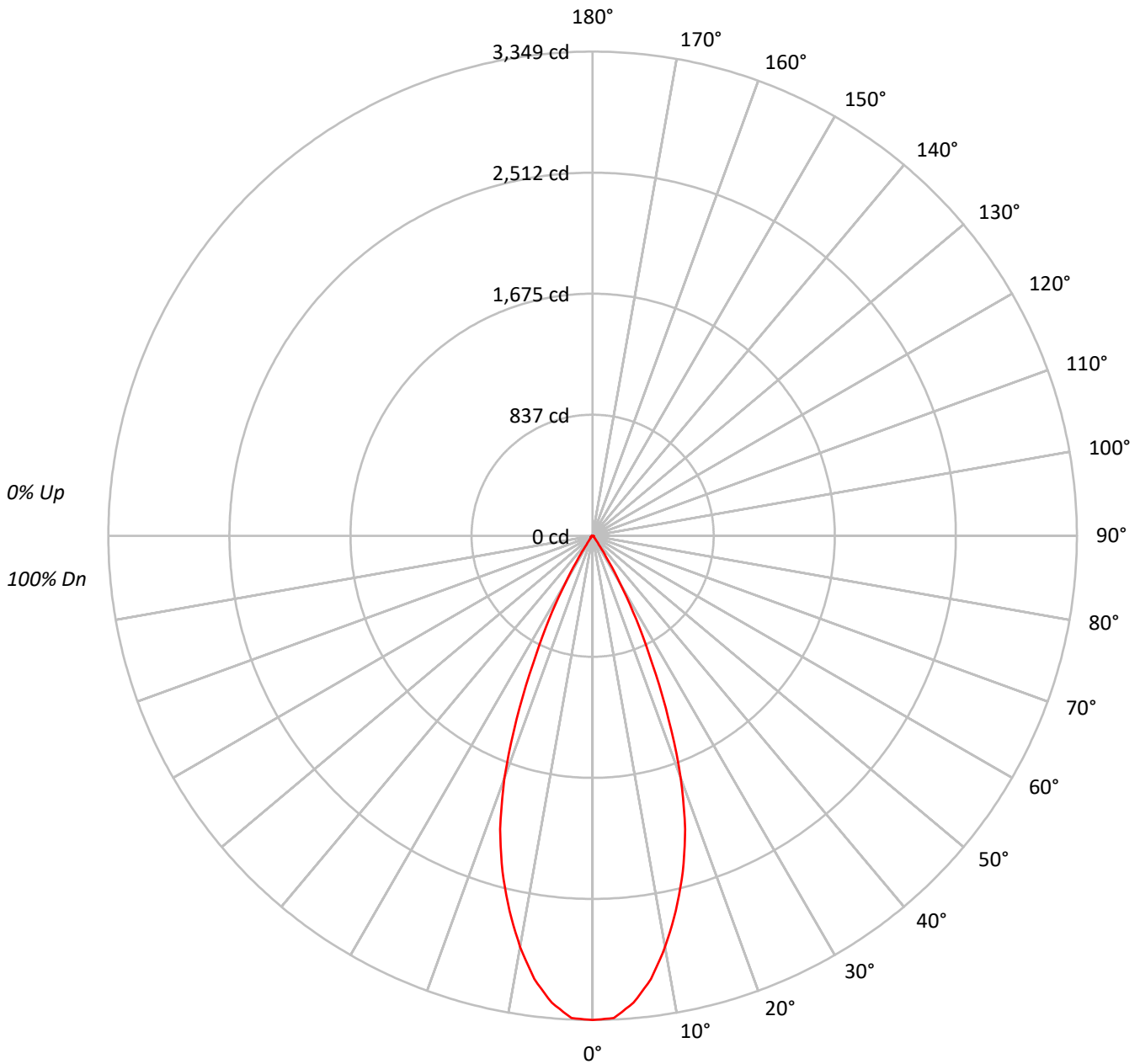
Lumens per Lamp: N/A
Luminaire Lumens: 1525.0 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 0.67 / 0.67 / 0.64
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	413122
5°	401451
10°	361592
15°	307328
20°	233803
25°	132381
30°	53453
35°	10691
40°	3864
45°	2791
50°	2686
55°	2796
60°	2960
65°	2919
70°	2885
75°	2859
80°	2841
85°	2830

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 57.5°
 Luminance: 2984 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	298.2	19.6
10°-20°	659.3	43.2
20°-30°	452.2	29.7
30°-40°	71.9	4.7
40°-50°	13.1	0.9
50°-60°	11.9	0.8
60°-70°	9.9	0.6
70°-80°	6.3	0.4
80°-90°	2.2	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°	1409.7	92.4
0°-40°	1481.6	97.2
0°-60°	1506.6	98.8
0°-90°	1525.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1525.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	3349	
5°	3242	298
15°	2407	659
25°	973	452
35°	71	72
45°	16	13
55°	13	12
65°	10	10
75°	6	6
85°	2	2
90°	0	



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CANDELA DISTRIBUTION (FULL):

	0°
0°	3349.3
2.5°	3339.3
5°	3242.3
7.5°	3091.2
10°	2887.0
12.5°	2656.9
15°	2406.7
17.5°	2127.5
20°	1781.2
22.5°	1373.0
25°	972.7
27.5°	650.5
30°	375.3
32.5°	173.1
35°	71.0
37.5°	39.0
40°	24.0
42.5°	18.0
45°	16.0
47.5°	15.0
50°	14.0
52.5°	14.0
55°	13.0
57.5°	13.0
60°	12.0
62.5°	11.0
65°	10.0
67.5°	9.0
70°	8.0
72.5°	7.0
75°	6.0
77.5°	5.0
80°	4.0
82.5°	3.0
85°	2.0
87.5°	1.0
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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(END OF REPORT)