

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: P886982

Luminaire Tested: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMB-1200LM-3500K

Issue Date: 7/18/2024

Test Information

Test Method: LM-79-2019
Report Number: P886982
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-38)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/18/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMB-1200LM-3500K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE BLACK TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 3500K CCT
Ballast/Driver: -

Summary

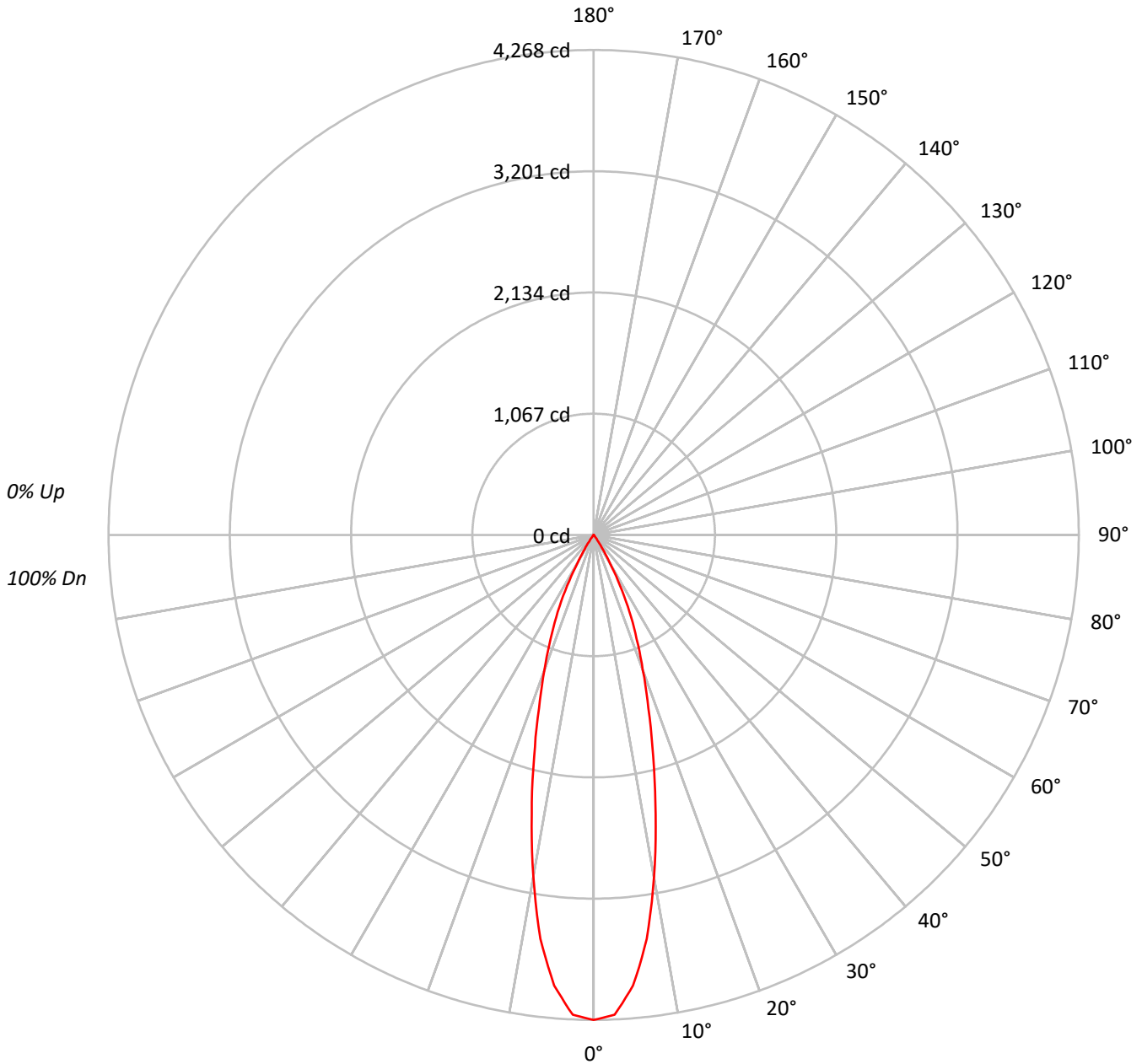
Lumens per Lamp: N/A
Luminaire Lumens: 1305.0 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 0.48 / 0.48 / 0.51
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V): NR
Input Current (A_{in}): 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





TEST NUMBER: P886982
 CATALOG NUMBER: ML412LSFL9FS1E-TIR4D25NFL-TL4RDDB-1200LM-3500K

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	115	113	111	109	112	110	109	107	106	105	104	103	102	101	99	99	98	96																			
2	111	107	104	101	109	105	102	100	102	100	98	99	97	96	97	95	94	92																			
3	107	102	98	95	105	101	97	94	98	95	93	96	93	91	94	92	90	89																			
4	103	97	93	90	102	96	93	90	94	91	89	93	90	88	91	88	87	85																			
5	100	93	89	86	98	93	88	85	91	87	85	89	86	84	88	85	83	82																			
6	96	90	85	82	95	89	85	82	88	84	81	86	83	81	85	82	80	79																			
7	93	86	82	79	92	86	82	78	85	81	78	84	80	78	83	80	77	76																			
8	90	83	79	76	89	83	78	76	82	78	75	81	77	75	80	77	75	74																			
9	88	80	76	73	87	80	76	73	79	75	73	78	75	72	78	74	72	71																			
10	85	78	73	70	84	77	73	70	77	73	70	76	72	70	75	72	70	69																			

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	526476
5°	492828
10°	382809
15°	257884
20°	165941
25°	101637
30°	40264
35°	9155
40°	1546
45°	366
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: 45°
 Luminance: 366 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.4	26.8
10°-20°	561.9	43.1
20°-30°	335.2	25.7
30°-40°	55.1	4.2
40°-50°	2.5	0.2
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°	1247.4	95.6
0°-40°	1302.5	99.8
0°-60°	1305.0	100.0
0°-90°	1305.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1305.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	4268	
5°	3980	350
15°	2020	562
25°	747	335
35°	61	55
45°	2	2
55°	0	0
65°	0	0
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	4268.3
2.5°	4226.7
5°	3980.3
7.5°	3585.5
10°	3056.4
12.5°	2517.7
15°	2019.5
17.5°	1600.2
20°	1264.2
22.5°	986.8
25°	746.8
27.5°	503.5
30°	282.7
32.5°	143.0
35°	60.8
37.5°	21.3
40°	9.6
42.5°	5.3
45°	2.1
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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(END OF REPORT)