

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: P886999

Luminaire Tested: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMW-1200LM-5000K

Issue Date: 7/18/2024

Test Information

Test Method: LM-79-2019
Report Number: P886999
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-36)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/18/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMW-1200LM-5000K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

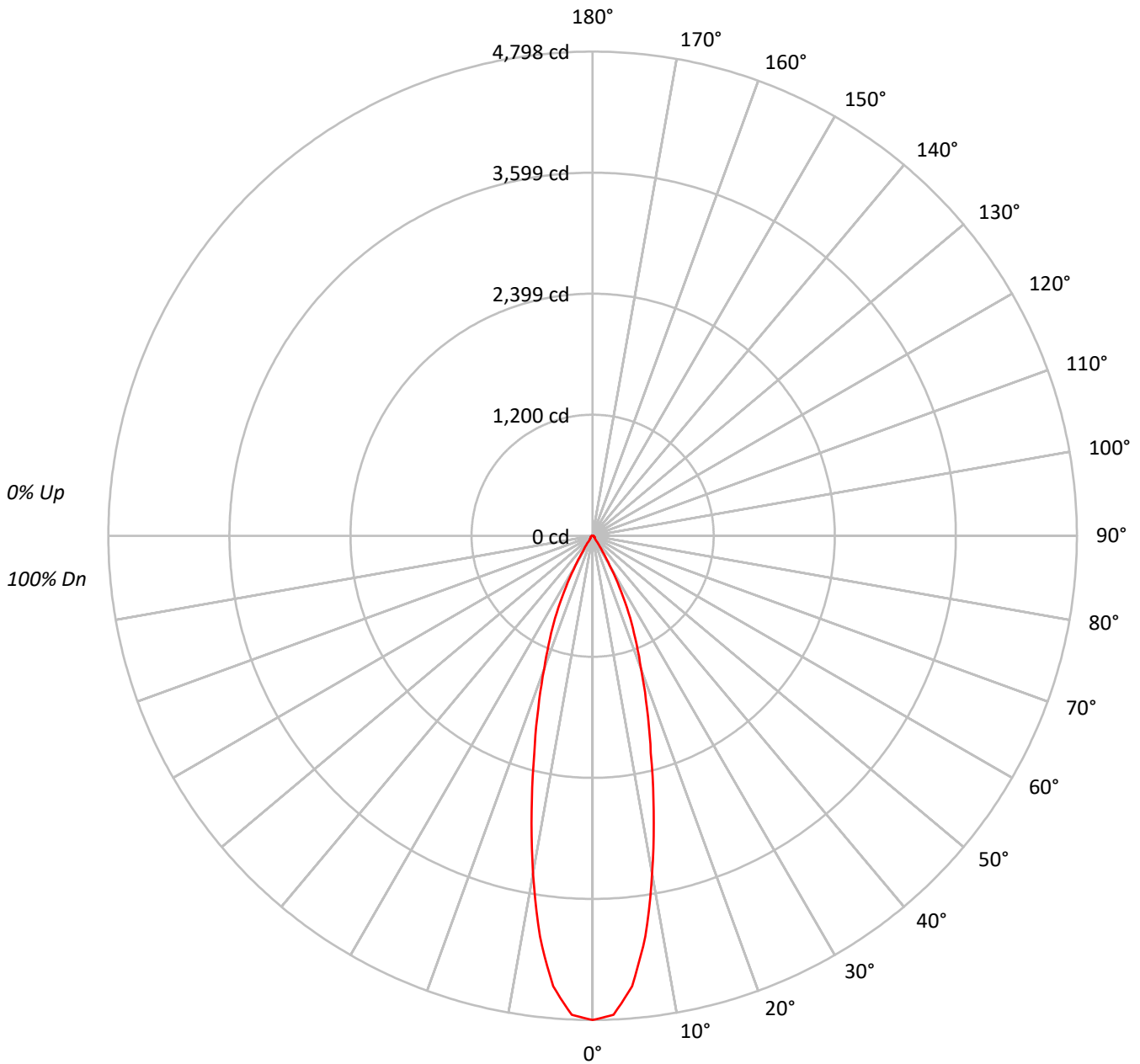
Lumens per Lamp: N/A
Luminaire Lumens: 1545.9 lumens
Efficiency: N/A
Efficacy: 87.8 lumens/watt
Spacing Criteria (0/90/45): 0.47 / 0.47 / 0.51
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

Input Watts (W): 17.6
Input Voltage (V): NR
Input Current (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



TEST NUMBER: P886999
CATALOG NUMBER: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMW-1200LM-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P886999

CATALOG NUMBER: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMW-1200LM-5000K

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20									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	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	105	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	91	87	100	94	90	87	92	88	86	90	87	85	88	86	84	82																												
5	98	91	86	83	96	90	86	82	88	84	82	87	83	81	85	82	80	79																												
6	94	87	82	79	93	86	82	78	85	81	78	84	80	77	82	79	77	76																												
7	91	84	79	75	90	83	78	75	82	78	75	81	77	74	80	76	74	73																												
8	88	80	76	72	87	80	75	72	79	75	72	78	74	72	77	74	71	70																												
9	85	77	73	69	84	77	72	69	76	72	69	75	72	69	75	71	69	68																												
10	82	75	70	67	82	74	70	67	74	70	67	73	69	67	72	69	66	65																												

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	591825
5°	554848
10°	425544
15°	284623
20°	183989
25°	114961
30°	47955
35°	14034
40°	5813
45°	4884
50°	4912
55°	5011
60°	4884
65°	5108
70°	5049
75°	5004
80°	4972
85°	4953

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 87.5°
 Luminance: 6504 cd/sqm



TEST NUMBER: P886999

CATALOG NUMBER: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMW-1200LM-5000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	392.3	25.4
10°-20°	623.7	40.3
20°-30°	377.6	24.4
30°-40°	76.6	5.0
40°-50°	22.3	1.4
50°-60°	20.7	1.3
60°-70°	17.2	1.1
70°-80°	11.4	0.7
80°-90°	4.1	0.3
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°	1393.7	90.1
0°-40°	1470.2	95.1
0°-60°	1513.3	97.9
0°-90°	1545.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1545.9	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	4798	
5°	4481	392
15°	2229	624
25°	845	378
35°	93	77
45°	28	22
55°	23	21
65°	18	17
75°	10	11
85°	4	4
90°	0	



TEST NUMBER: P886999

CATALOG NUMBER: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMW-1200LM-5000K

CANDELA DISTRIBUTION (FULL):

0°	
0°	4798.1
2.5°	4751.5
5°	4481.2
7.5°	4004.6
10°	3397.6
12.5°	2791.7
15°	2228.9
17.5°	1788.5
20°	1401.7
22.5°	1103.4
25°	844.7
27.5°	570.9
30°	336.7
32.5°	182.9
35°	93.2
37.5°	47.8
40°	36.1
42.5°	31.5
45°	28.0
47.5°	25.6
50°	25.6
52.5°	24.5
55°	23.3
57.5°	22.1
60°	19.8
62.5°	18.6
65°	17.5
67.5°	16.3
70°	14.0
72.5°	12.8
75°	10.5
77.5°	9.3
80°	7.0
82.5°	5.8
85°	3.5
87.5°	2.3
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

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

Scaled Data Report



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

Scaled Data Report



— 0°-180°

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

Scaled Data Report



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

Scaled Data Report



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

Scaled Data Report



(END OF REPORT)