

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: P886995

Luminaire Tested: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMW-1200LM-2700K

Issue Date: 7/18/2024

Test Information

Test Method: LM-79-2019
Report Number: P886995
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-2700K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 25D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1327.0 lumens
Efficiency: N/A
Efficacy: 75.4 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

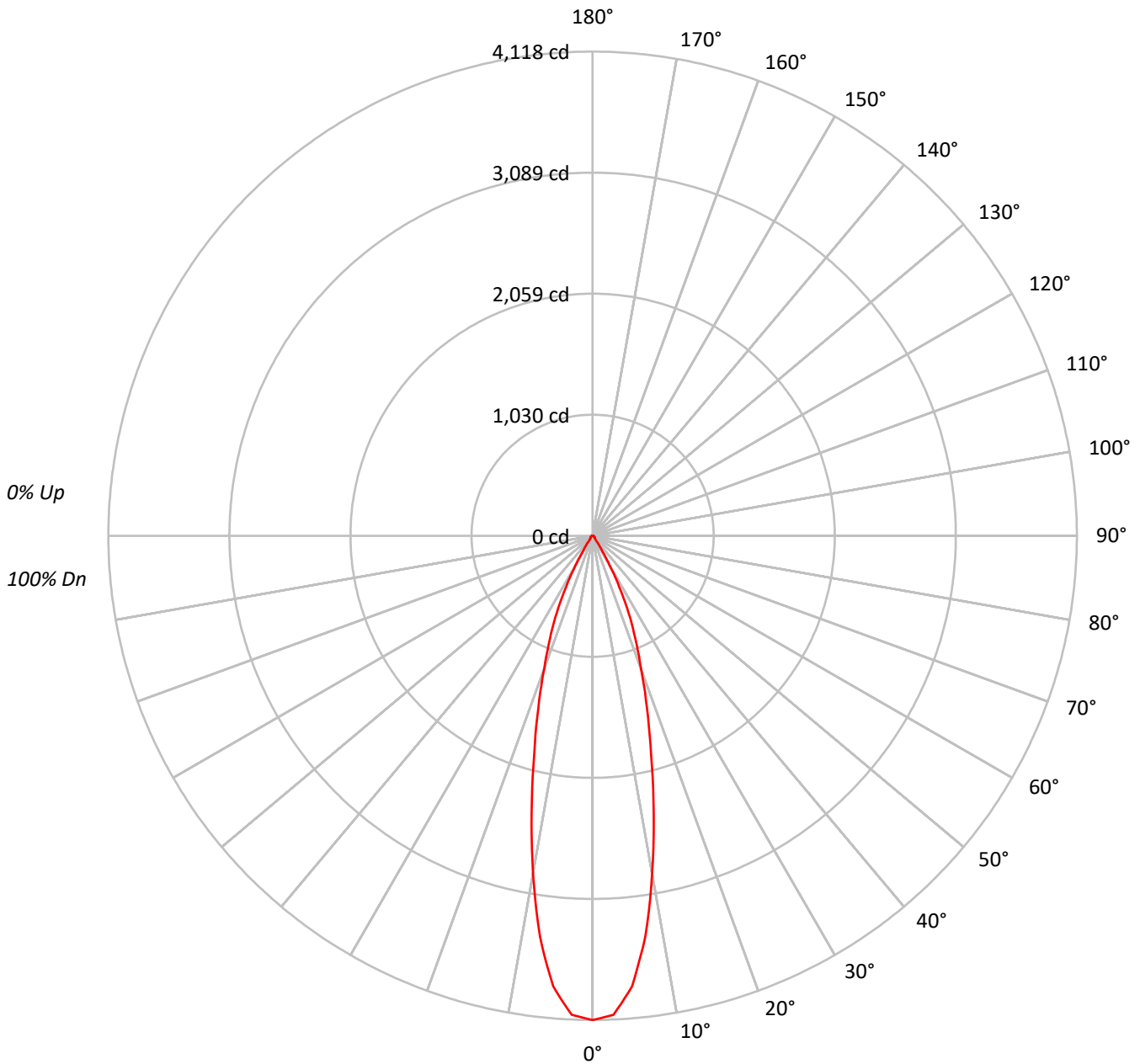
Input Watts (W): 17.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



TEST NUMBER: P886995

CATALOG NUMBER: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMW-1200LM-2700K

Luminous Intensity Polar Plot





TEST NUMBER: P886995
 CATALOG NUMBER: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMW-1200LM-2700K

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	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°	507987
5°	476249
10°	365262
15°	244309
20°	157921
25°	98684
30°	41161
35°	12046
40°	4992
45°	4186
50°	4222
55°	4301
60°	4194
65°	4378
70°	4328
75°	4289
80°	4262
85°	4246

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 87.5°
 Luminance: 5656 cd/sqm



TEST NUMBER: P886995

CATALOG NUMBER: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMW-1200LM-2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	336.7	25.4
10°-20°	535.4	40.3
20°-30°	324.2	24.4
30°-40°	65.7	5.0
40°-50°	19.2	1.4
50°-60°	17.8	1.3
60°-70°	14.7	1.1
70°-80°	9.8	0.7
80°-90°	3.5	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°	1196.3	90.1
0°-40°	1262.0	95.1
0°-60°	1299.0	97.9
0°-90°	1327.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1327.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	4118	
5°	3846	337
15°	1913	535
25°	725	324
35°	80	66
45°	24	19
55°	20	18
65°	15	15
75°	9	10
85°	3	4
90°	0	



TEST NUMBER: P886995

CATALOG NUMBER: ML412LSFL9FS1E-TIR4D25NFL-TL4RDMW-1200LM-2700K

CANDELA DISTRIBUTION (FULL):

0°	
0°	4118.4
2.5°	4078.4
5°	3846.4
7.5°	3437.4
10°	2916.3
12.5°	2396.3
15°	1913.2
17.5°	1535.2
20°	1203.1
22.5°	947.1
25°	725.1
27.5°	490.1
30°	289.0
32.5°	157.0
35°	80.0
37.5°	41.0
40°	31.0
42.5°	27.0
45°	24.0
47.5°	22.0
50°	22.0
52.5°	21.0
55°	20.0
57.5°	19.0
60°	17.0
62.5°	16.0
65°	15.0
67.5°	14.0
70°	12.0
72.5°	11.0
75°	9.0
77.5°	8.0
80°	6.0
82.5°	5.0
85°	3.0
87.5°	2.0
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

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)