

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: P887059

Luminaire Tested: ML412LSFL9FS1E-TIR4D55WFL-TL4RDMW-1200LM-5000K

Issue Date: 7/9/2024

Test Information

Test Method: LM-79-2019
Report Number: P887059
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2402-314-42)
Test Lab: COOPER LIGHTING SOLUTIONS
Issue Date: 7/9/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: HALO
Catalog Number: ML412LSFL9FS1E-TIR4D55WFL-TL4RDMW-1200LM-5000K
Description: 4IN ROUND ML FLEX, SELECTABLE CCT, WITH 55D TIR, MATTE WHITE TRIM
Light Source: (1) STANDARD SELECTABLE LUMEN LED 90CRI / 5000K CCT
Ballast/Driver: -

Summary

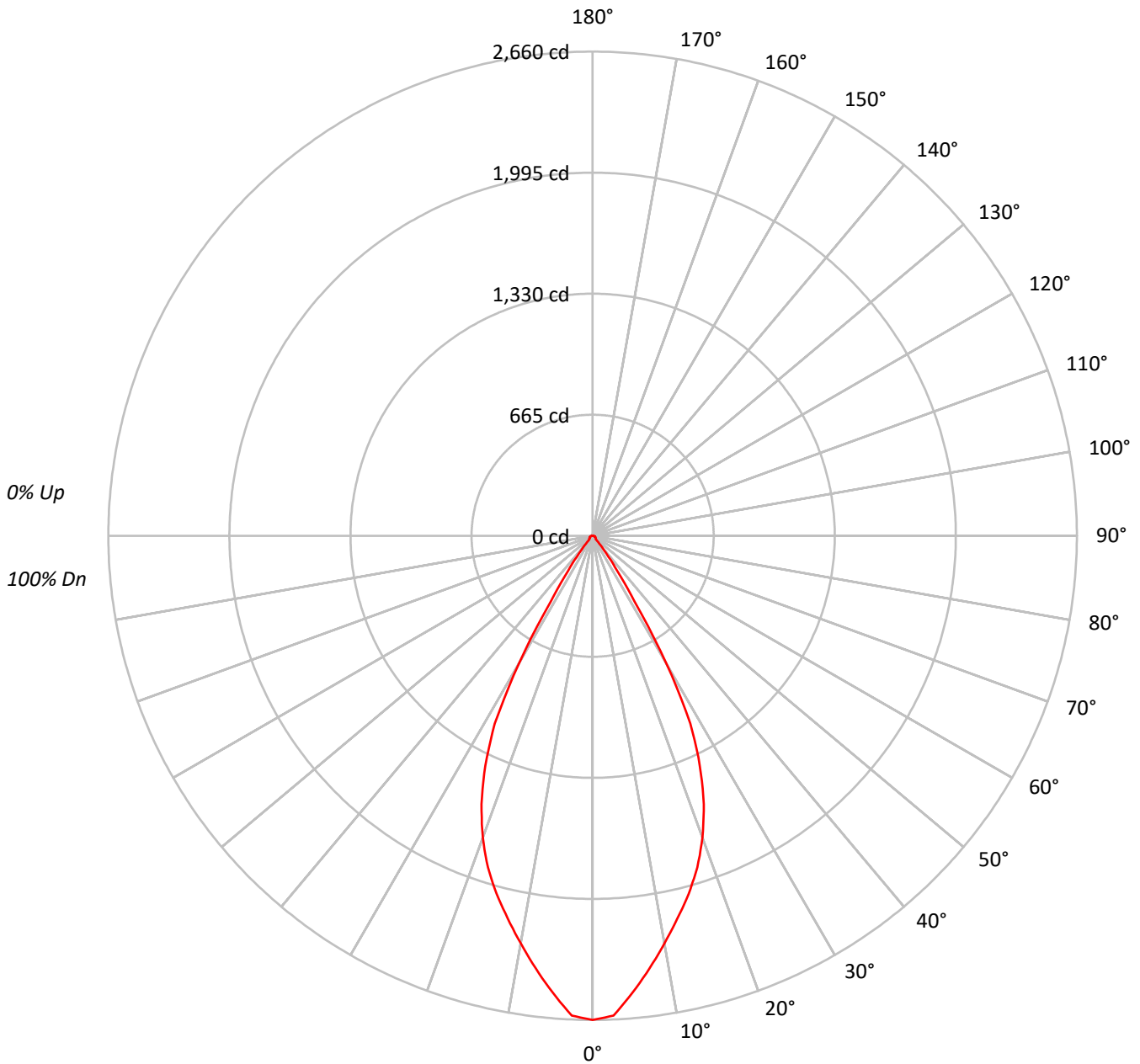
Lumens per Lamp: N/A
Luminaire Lumens: 1671.9 lumens
Efficiency: N/A
Efficacy: 95.0 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 0.79 / 0.78
Luminous Opening: Circular (Dia: 0.33' x H: 0')
CIE Type: Direct

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				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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94		
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88		
3	104	98	93	89	102	96	92	89	94	90	87	91	88	86	89	87	85	83		
4	99	92	87	83	97	91	86	83	89	85	82	87	83	81	85	82	80	78		
5	95	87	82	78	93	86	81	77	84	80	77	83	79	76	81	78	75	74		
6	91	82	77	73	89	82	76	73	80	76	72	79	75	72	78	74	71	70		
7	87	78	73	69	85	78	72	69	76	72	68	75	71	68	74	70	68	66		
8	83	74	69	65	82	74	69	65	73	68	65	72	67	64	71	67	64	63		
9	80	71	65	62	79	70	65	62	69	65	61	69	64	61	68	64	61	60		
10	76	67	62	59	75	67	62	59	66	62	58	66	61	58	65	61	58	57		

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	328099
5°	311907
10°	284740
15°	260118
20°	231598
25°	189733
30°	115452
35°	35250
40°	9194
45°	4274
50°	4471
55°	4516
60°	4588
65°	4757
70°	4616
75°	5004
80°	4972
85°	4953

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 75°
 Luminance: 5004 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.8	13.9
10°-20°	568.3	34.0
20°-30°	617.2	36.9
30°-40°	182.9	10.9
40°-50°	22.2	1.3
50°-60°	18.8	1.1
60°-70°	15.7	0.9
70°-80°	10.6	0.6
80°-90°	3.5	0.2
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°	1418.2	84.8
0°-40°	1601.1	95.8
0°-60°	1642.1	98.2
0°-90°	1671.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1671.9	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2660	
5°	2519	233
15°	2037	568
25°	1394	617
35°	234	183
45°	24	22
55°	21	19
65°	16	16
75°	10	11
85°	4	4
90°	0	



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CANDELA DISTRIBUTION (FULL):

	0°
0°	2660.0
2.5°	2637.9
5°	2519.1
7.5°	2396.8
10°	2273.4
12.5°	2153.4
15°	2037.0
17.5°	1911.2
20°	1764.4
22.5°	1595.6
25°	1394.1
27.5°	1163.5
30°	810.6
32.5°	428.6
35°	234.1
37.5°	122.3
40°	57.1
42.5°	28.0
45°	24.5
47.5°	23.3
50°	23.3
52.5°	22.1
55°	21.0
57.5°	19.8
60°	18.6
62.5°	17.5
65°	16.3
67.5°	14.0
70°	12.8
72.5°	11.6
75°	10.5
77.5°	8.2
80°	7.0
82.5°	4.7
85°	3.5
87.5°	1.2
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)