

LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for
Cooper Lighting Solutions
(formerly Eaton)

Brand: HALO

Report Number: P601456

Luminaire Tested: **ML4DM10LSNFL9FS1E - TIR4D25NFL - TL41R_ TL42S_ 5000K**

Issue Date: 7/29/2022

Tested By:

Approved By:



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Test Information

Test Method: LM-79-08
 Report Number: P601456
 Test Lab: COOPER LIGHTING SOLUTIONS
 Issue Date: 7/29/2022
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML4DM10LSNFL9FS1E - TIR4D25NFL - TL41R_ TL42S_ 5000K
 Description: DIRECT MOUNT, 25D OPTIC, OPEN TRIM
 Light Source: (1) SELECTABLE LUMEN LED 90CRI / 5000K CCT
 Ballast/Driver: -

Summary

Lumens per Lamp: N/A
 Luminaire Lumens: 1271.3 lumens
 Efficiency: N/A
 Efficacy: 105.9 lumens/watt
 Spacing Criteria (0/90/45): 0.43 / 0.43 / 0.46
 Luminous Opening: Circular (Dia: 0.21' x H: 0')
 CIE Type: Direct

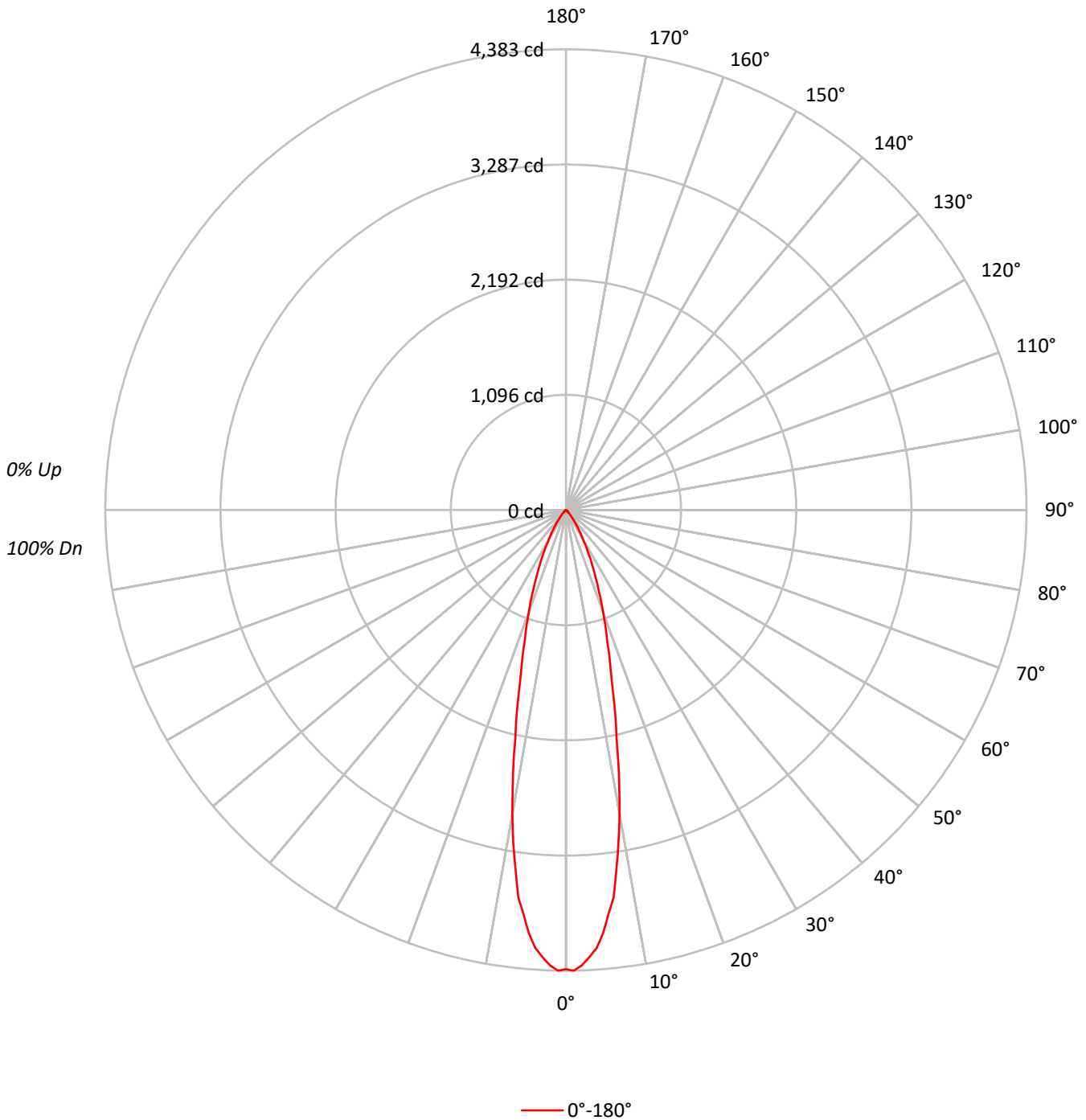
Input Watts (W): 12
 Input Voltage (V): NR
 Input Current (A_{in}): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 25 FT



Meas		Calibration Due Date	
Instrument	Identificatio		
Photometer	GONIO 1 11111111	4/22/2021	10/22/2021
Power Meter	XITRON 2801 IN0197	12/1/2020	12/1/2021
AC Power Source	CHROMA 61505 IN0196	12/1/2020	12/1/2021
DC Power Supply	AGILENT E3634A IN0198	11/30/2020	11/30/2021
Room Thermometer	ONSET IN0143	12/1/2020	12/1/2021

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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	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	115	112	110	108	112	110	108	107	106	105	103	102	101	100	99	98	97	96	96	96	96
2	110	106	103	100	108	105	102	99	101	99	97	98	97	95	96	94	93	91	91	91	91
3	106	101	97	94	104	100	96	93	97	94	91	95	92	90	93	90	89	87	87	87	87
4	102	96	92	88	101	95	91	88	93	90	87	91	88	86	89	87	85	84	84	84	84
5	98	92	87	84	97	91	87	83	89	86	83	88	84	82	86	84	81	80	80	80	80
6	95	88	83	80	94	87	83	80	86	82	79	85	81	79	83	80	78	77	77	77	77
7	92	84	80	76	91	84	79	76	83	79	76	82	78	75	81	77	75	74	74	74	74
8	89	81	76	73	88	81	76	73	80	76	73	79	75	72	78	75	72	71	71	71	71
9	86	78	74	70	85	78	73	70	77	73	70	76	72	70	75	72	70	69	69	69	69
10	83	75	71	68	82	75	71	68	74	70	68	74	70	67	73	70	67	66	66	66	66

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	1379262
5°	1281420
10°	942094
15°	549493
20°	346750
25°	213505
30°	121927
35°	65917
40°	31162
45°	15540
50°	8941
55°	4184
60°	1895
65°	1121
70°	1385
75°	0
80°	0
85°	0

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	350.2	27.5
10°-20°	483.1	38.0
20°-30°	286.2	22.5
30°-40°	112.0	8.8
40°-50°	29.9	2.4
50°-60°	7.7	0.6
60°-70°	2.0	0.2
70°-80°	0.2	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°	1119.6	88.1
0°-40°	1231.6	96.9
0°-60°	1269.1	99.8
0°-90°	1271.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1271.3	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	4368	
5°	4043	350
15°	1681	483
25°	613	286
35°	171	112
45°	35	30
55°	8	8
65°	2	2
75°	0	0
85°	0	0
90°	0	

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CANDELA DISTRIBUTION (FULL):

0°	
0°	4368.0
1°	4383.1
2°	4334.7
3°	4259.0
4°	4178.9
5°	4042.7
6°	3865.7
7°	3715.9
8°	3452.6
9°	3198.4
10°	2938.2
12.5°	2231.6
15°	1680.9
17.5°	1304.2
20°	1031.9
22.5°	800.4
25°	612.8
27.5°	458.4
30°	334.4
32.5°	243.6
35°	171.0
37.5°	113.5
40°	75.6
42.5°	49.9
45°	34.8
47.5°	25.7
50°	18.2
52.5°	12.1
55°	7.6
57.5°	4.5
60°	3.0
62.5°	3.0
65°	1.5
67.5°	1.5
70°	1.5
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

(END OF REPORT)