

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: P601354

Luminaire Tested: **ML4DM06NFL9FS1E - TIR4D25NFL - TL41R_ TL42S_ 2700K**

Issue Date: 7/29/2022

Tested By:

Approved By:



Cooper Lighting Solutions laboratories have been accredited by National Voluntary Laboratory Accreditation Program (NVLAP) that it adheres to the requirements of ISO/IEC 17025:2005 and appropriate IESNA test methods. This report must not be used to claim product certification, approval or endorsement by NVLAP, NIST or any agency of the Federal Government. Results contained in this report are valid for luminaire sample tested, as supplied by requestor. Information related to the luminaire tested has been supplied by requestor and can affect the validity of the test results. Report shall not be reproduced except in full without approval of Cooper Lighting Solutions Lighting Laboratory. Test performed at address noted above.

Test Information

Test Method: LM-79-08
 Report Number: P601354
 Test Lab: COOPER LIGHTING SOLUTIONS
 Issue Date: 7/29/2022
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML4DM06NFL9FS1E - TIR4D25NFL - TL41R_ TL42S_ 2700K
 Description: DIRECT MOUNT, 25D OPTIC, OPEN TRIM
 Light Source: (1) SELECTABLE LUMEN LED 90CRI / 2700K CCT
 Ballast/Driver: -

Summary

Lumens per Lamp: N/A
 Luminaire Lumens: 840.0 lumens
 Efficiency: N/A
 Efficacy: 101.2 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

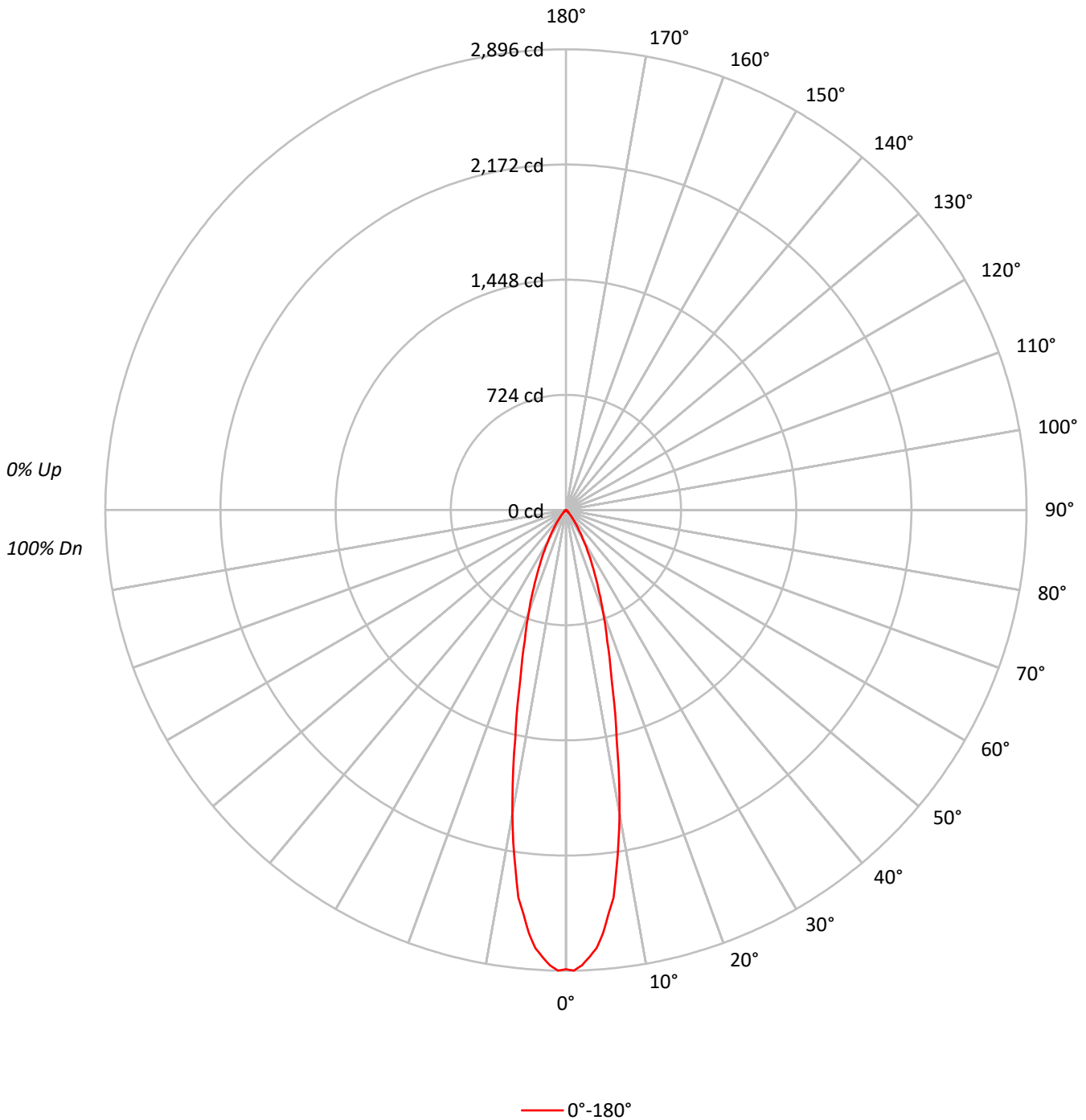
Input Watts (W): 8.3
 Input Voltage (V): NR
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 25 FT



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

TEST NUMBER: P601354
CATALOG NUMBER: ML4DM06NFL9FS1E - TIR4D25NFL - TL41R_ TL42S_ 2700K

Luminous Intensity Polar Plot



TEST NUMBER: P601354
 CATALOG NUMBER: ML4DM06NFL9FS1E - TIR4D25NFL - TL41R_ TL42S_ 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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	115	112	110	108	112	110	108	107	106	105	103	102	101	100	99	98	97	96	96	96
2	110	106	103	100	108	105	102	99	101	99	97	98	97	95	96	94	93	91	91	91
3	106	101	97	94	104	100	96	93	97	94	91	95	92	90	93	90	89	87	87	87
4	102	96	92	88	101	95	91	88	93	90	87	91	88	86	89	87	85	84	84	84
5	98	92	87	84	97	91	87	83	89	86	83	88	84	82	86	84	81	80	80	80
6	95	88	83	80	94	87	83	80	86	82	79	85	81	78	83	80	78	77	77	77
7	92	84	80	76	91	84	79	76	83	79	76	82	78	75	81	77	75	74	74	74
8	89	81	76	73	88	81	76	73	80	76	73	79	75	72	78	75	72	71	71	71
9	86	78	74	70	85	78	73	70	77	73	70	76	72	70	75	72	70	69	69	69
10	83	75	71	68	82	75	71	68	74	70	68	74	70	67	73	70	67	66	66	66

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	911298
5°	846662
10°	622451
15°	363060
20°	229105
25°	141071
30°	80543
35°	43559
40°	20610
45°	10271
50°	5895
55°	2753
60°	1263
65°	747
70°	923
75°	0
80°	0
85°	0

TEST NUMBER: P601354
 CATALOG NUMBER: ML4DM06NFL9FS1E - TIR4D25NFL - TL41R_ TL42S_ 2700K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.4	27.5
10°-20°	319.2	38.0
20°-30°	189.1	22.5
30°-40°	74.0	8.8
40°-50°	19.8	2.4
50°-60°	5.1	0.6
60°-70°	1.4	0.2
70°-80°	0.1	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°	739.7	88.1
0°-40°	813.7	96.9
0°-60°	838.5	99.8
0°-90°	840.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	840.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2886	
5°	2671	231
15°	1111	319
25°	405	189
35°	113	74
45°	23	20
55°	5	5
65°	1	1
75°	0	0
85°	0	0
90°	0	

TEST NUMBER: P601354
CATALOG NUMBER: ML4DM06NFL9FS1E - TIR4D25NFL - TL41R_ TL42S_ 2700K

CANDELA DISTRIBUTION (FULL):

0°	
0°	2886.0
1°	2896.0
2°	2864.0
3°	2814.0
4°	2761.0
5°	2671.1
6°	2554.1
7°	2455.1
8°	2281.2
9°	2113.3
10°	1941.3
12.5°	1474.5
15°	1110.6
17.5°	861.7
20°	681.8
22.5°	528.8
25°	404.9
27.5°	302.9
30°	220.9
32.5°	160.9
35°	113.0
37.5°	75.0
40°	50.0
42.5°	33.0
45°	23.0
47.5°	17.0
50°	12.0
52.5°	8.0
55°	5.0
57.5°	3.0
60°	2.0
62.5°	2.0
65°	1.0
67.5°	1.0
70°	1.0
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

(END OF REPORT)