

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: P601463

Luminaire Tested: **ML4DM10LSWFL9FS1E - TIR4D55WFL - TL41R_ TL42S_ 3000K**

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: P601463
 Test Lab: COOPER LIGHTING SOLUTIONS
 Issue Date: 7/29/2022
 Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
 Product Line: HALO
 Catalog Number: ML4DM10LSWFL9FS1E - TIR4D55WFL - TL41R_ TL42S_ 3000K
 Description: DIRECT MOUNT, 55D OPTIC, OPEN TRIM
 Light Source: (1) SELECTABLE LUMEN LED 90CRI / 3000K CCT
 Ballast/Driver: -

Summary

Lumens per Lamp: N/A
 Luminaire Lumens: 1062.2 lumens
 Efficiency: N/A
 Efficacy: 82.3 lumens/watt
 Spacing Criteria (0/90/45): 0.91 / 0.91 / 0.84
 Luminous Opening: Circular (Dia: 0.21' x H: 0')
 CIE Type: Direct

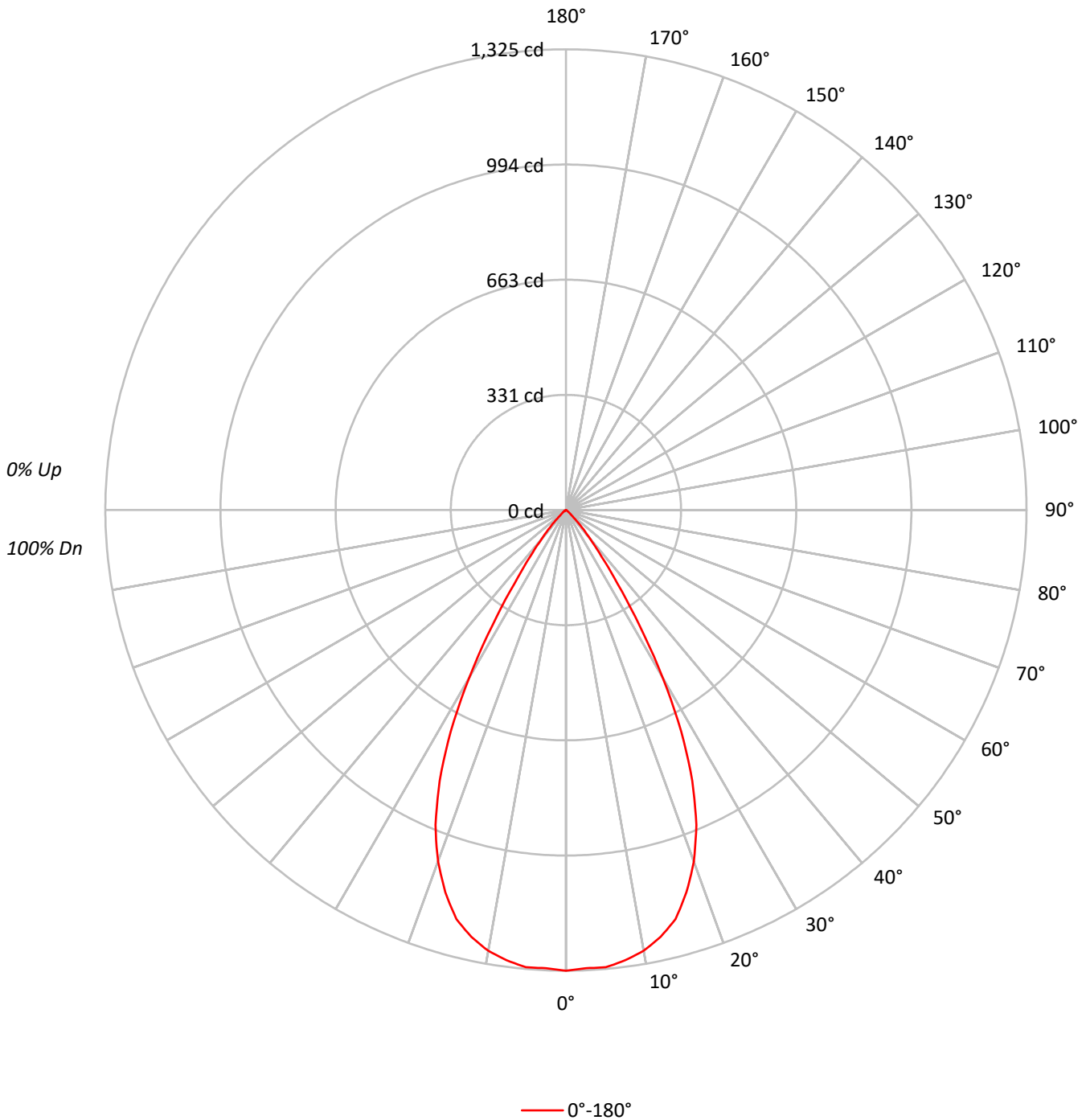
Input Watts (W): 12.9
 Input Voltage (V): NR
 Input Current (Ain): NR
 Voltage Rise (V): NR
 Power Factor: NR
 Total Harmonic Distortion (THDi): NR
 Frequency (hertz): 60
 Stabilization Time: NR
 Operation Time: NR
 Ambient Temperature (°C): NR
 Test Distance: 25 FT



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: P601463
CATALOG NUMBER: ML4DM10LSWFL9FS1E - TIR4D55WFL - TL41R_ TL42S_ 3000K

Luminous Intensity Polar Plot



TEST NUMBER: P601463
 CATALOG NUMBER: ML4DM10LSWFL9FS1E - TIR4D55WFL - TL41R_ TL42S_ 3000K

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	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	114	111	109	107	111	109	107	105	105	103	102	101	100	99	98	97	96	94	94	94	94
2	109	104	100	97	106	102	99	96	99	96	94	96	94	92	93	92	90	88	88	88	88
3	104	98	93	89	102	96	92	88	94	90	87	91	88	86	89	86	84	83	83	83	83
4	99	92	86	82	97	91	86	82	88	84	81	86	83	80	85	82	79	78	78	78	78
5	94	86	81	77	93	85	80	76	84	79	76	82	78	75	80	77	74	73	73	73	73
6	90	81	76	72	88	81	75	71	79	74	71	78	74	71	76	73	70	69	69	69	69
7	86	77	71	67	84	76	71	67	75	70	67	74	70	66	73	69	66	65	65	65	65
8	82	73	67	63	81	72	67	63	71	66	63	70	66	63	69	65	62	61	61	61	61
9	78	69	63	60	77	69	63	60	68	63	59	67	62	59	66	62	59	58	58	58	58
10	75	66	60	56	74	65	60	56	64	59	56	64	59	56	63	59	56	55	55	55	55

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	418399
5°	418402
10°	412741
15°	398205
20°	361591
25°	299578
30°	203061
35°	99355
40°	44563
45°	16297
50°	6785
55°	2769
60°	809
65°	0
70°	0
75°	0
80°	0
85°	0

TEST NUMBER: P601463
 CATALOG NUMBER: ML4DM10LSWFL9FS1E - TIR4D55WFL - TL41R_ TL42S_ 3000K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.8	11.8
10°-20°	337.8	31.8
20°-30°	383.5	36.1
30°-40°	175.3	16.5
40°-50°	35.2	3.3
50°-60°	5.2	0.5
60°-70°	0.5	0.0
70°-80°	0.0	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°	846.1	79.7
0°-40°	1021.3	96.2
0°-60°	1061.7	100.0
0°-90°	1062.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1062.2	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	1325	
5°	1320	125
15°	1218	338
25°	860	383
35°	258	175
45°	36	35
55°	5	5
65°	0	0
75°	0	0
85°	0	0
90°	0	

TEST NUMBER: P601463
CATALOG NUMBER: ML4DM10LSWFL9FS1E - TIR4D55WFL - TL41R_ TL42S_ 3000K

CANDELA DISTRIBUTION (FULL):

	0°
0°	1325.0
2.5°	1318.7
5°	1320.0
7.5°	1306.2
10°	1287.3
12.5°	1257.2
15°	1218.1
17.5°	1152.8
20°	1076.1
22.5°	980.6
25°	859.8
27.5°	717.8
30°	556.9
32.5°	392.2
35°	257.7
37.5°	168.5
40°	108.1
42.5°	67.9
45°	36.5
47.5°	21.4
50°	13.8
52.5°	8.8
55°	5.0
57.5°	2.5
60°	1.3
62.5°	1.3
65°	0.0
67.5°	0.0
70°	0.0
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)