

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: HALO

Report Number: P392727

Luminaire Tested: **ML4D09_940 - TIR45SP15 - TL41RMW - TL42SMW**

Issue Date: 3/19/2020

Test Information

Test Method: LM-41-14
Report Number: P392727
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1809-960-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/19/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_940 - TIR45SP15 - TL41RMW - TL42SMW
Description: ML4 900LM, 15° SP OPTIC, WITH ROUND PINHOLE MATTE WHITE FLANGE
Light Source: (1) HIGH LUMEN LED 90CRI / 4000K CCT
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1198.8 lumens
Efficiency: N/A
Efficacy: 106.1 lumens/watt
Spacing Criteria (0/90/45): 0.29 / 0.29 / 0.28
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

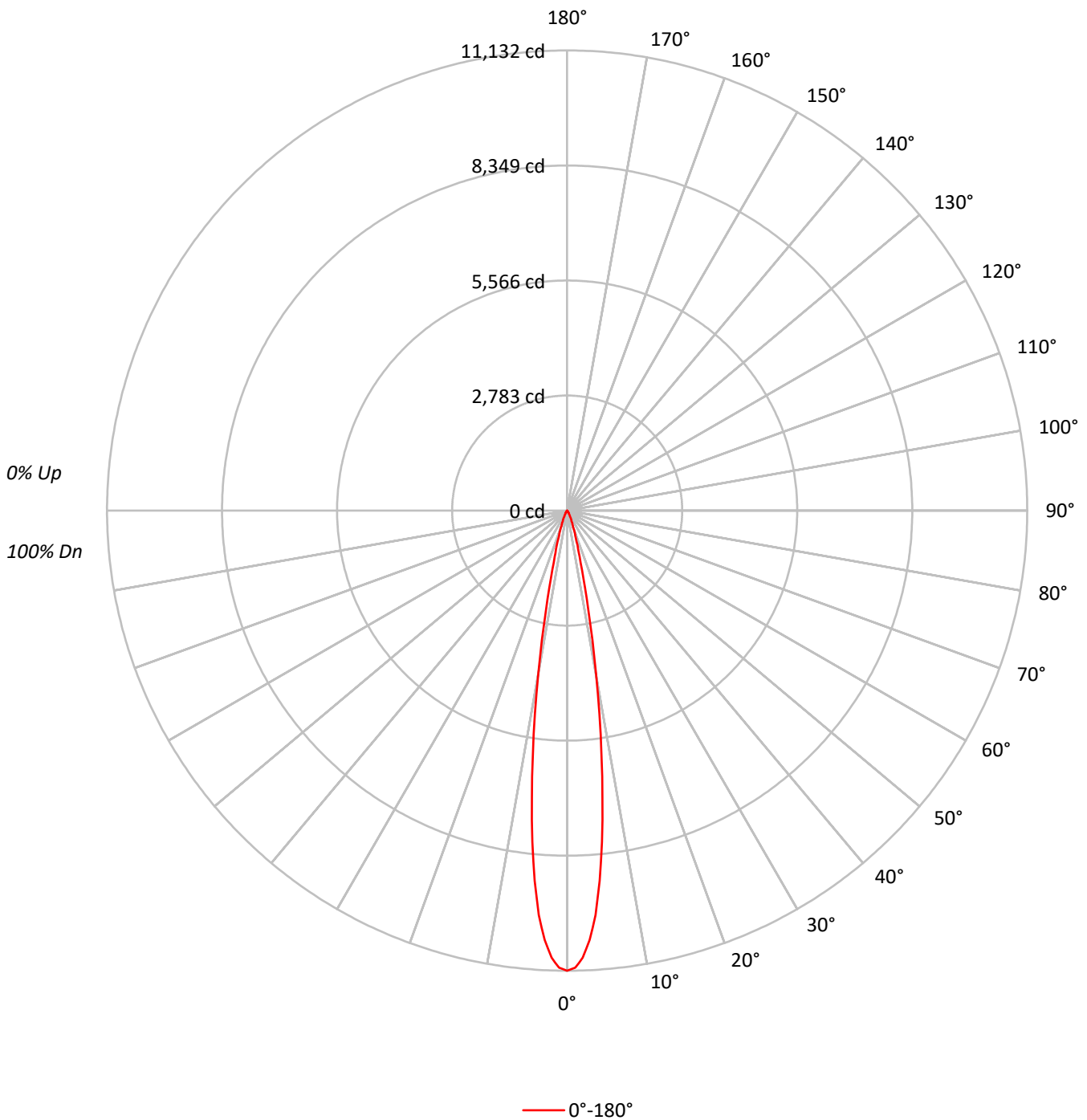
Input Watts (W): 11.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	116	114	112	111	113	112	110	109	108	107	106	104	103	102	101	100	100	98
2	113	109	107	105	111	108	106	104	105	103	101	102	101	99	99	98	97	96
3	110	106	103	100	108	105	102	100	102	100	98	100	98	97	98	96	95	94
4	107	103	99	97	106	102	99	96	100	97	95	98	96	94	96	95	93	92
5	105	100	97	94	104	99	96	94	98	95	93	96	94	92	95	93	91	90
6	103	98	94	92	102	97	94	91	96	93	91	95	92	90	93	91	90	89
7	101	95	92	90	100	95	92	89	94	91	89	93	90	89	92	90	88	87
8	99	93	90	88	98	93	90	88	92	89	87	91	89	87	91	88	87	86
9	97	92	88	86	96	91	88	86	91	88	86	90	87	86	89	87	85	85
10	95	90	87	85	95	90	87	85	89	86	84	88	86	84	88	86	84	83

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	5492252
5°	4453663
10°	2012380
15°	589853
20°	229287
25°	105338
30°	42956
35°	21984
40°	11013
45°	3279
50°	1765
55°	688
60°	0
65°	0
70°	0
75°	0
80°	0
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	687.3	57.3
10°-20°	386.0	32.2
20°-30°	95.1	7.9
30°-40°	24.5	2.0
40°-50°	4.9	0.4
50°-60°	1.0	0.1
60°-70°	0.0	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°	1168.4	97.5
0°-40°	1192.9	99.5
0°-60°	1198.8	100.0
0°-90°	1198.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1198.8	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	11132	
5°	8992	687
15°	1155	386
25°	194	95
35°	36	25
45°	5	5
55°	1	1
65°	0	0
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	11131.9
1°	11058.8
2°	10822.6
3°	10398.3
4°	9809.3
5°	8992.5
6°	8063.9
7°	6998.5
8°	5973.5
9°	4968.7
10°	4016.8
11°	3193.9
12°	2468.1
13°	1913.2
14°	1469.5
15°	1154.8
17.5°	693.9
20°	436.7
22.5°	288.3
25°	193.5
27.5°	125.1
30°	75.4
32.5°	52.1
35°	36.5
37.5°	25.6
40°	17.1
42.5°	8.5
45°	4.7
47.5°	3.1
50°	2.3
52.5°	1.6
55°	0.8
57.5°	0.8
60°	0.0
62.5°	0.0
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



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CANDELA DISTRIBUTION (continued):

90° | $\frac{0^\circ}{0.0}$

(END OF REPORT)