

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: P300515

Luminaire Tested: **ML4D09_27D2WE - TIR45FL40 - TL41RBN - TL42SBN**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P300515
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-27)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_27D2WE - TIR45FL40 - TL41RBN - TL42SBN
Description: ML4 2700K, 900LM DIM-TO-WARM, 40 DEG FL OPTIC, WITH ROUND/SQUARE PINHOLE BRUSH NICKEL FLANGE
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 542.0 lumens
Efficiency: N/A
Efficacy: 48.4 lumens/watt
Spacing Criteria (0/90/45): 0.57 / 0.57 / 0.56
Luminous Opening: Circular (Dia: 0.19' x H: 0')
CIE Type: Direct

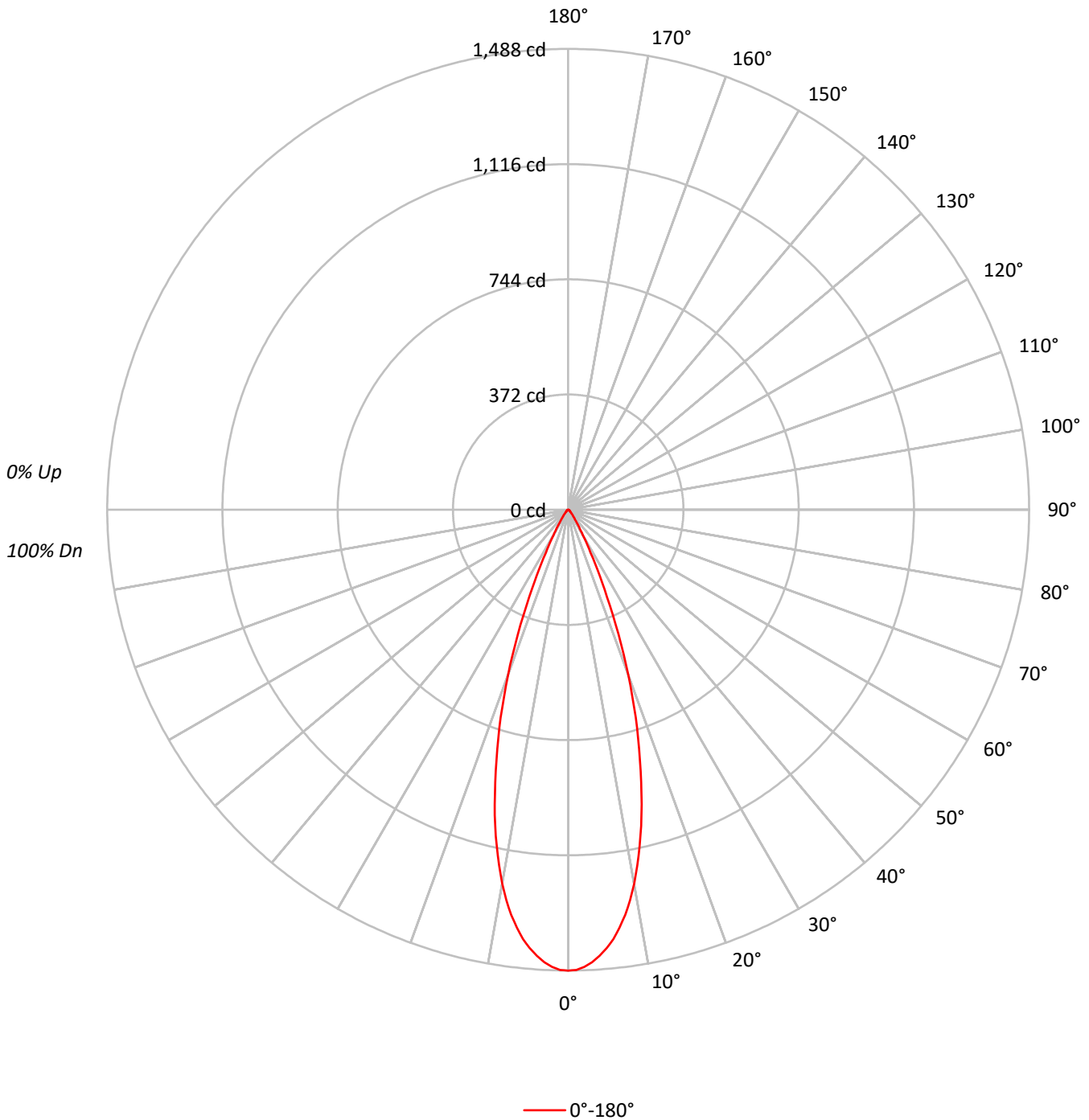
Input Watts (W): 11.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	580265
5°	556224
10°	485307
15°	367463
20°	235594
25°	111146
30°	42403
35°	18608
40°	10178
45°	6064
50°	3639
55°	2039
60°	780
65°	922
70°	0
75°	0
80°	0
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.5	23.9
10°-20°	246.8	45.5
20°-30°	125.5	23.2
30°-40°	27.8	5.1
40°-50°	8.8	1.6
50°-60°	3.0	0.6
60°-70°	0.6	0.1
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°	501.8	92.6
0°-40°	529.6	97.7
0°-60°	541.4	99.9
0°-90°	542.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	542.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	1488	
5°	1421	130
15°	910	247
25°	258	125
35°	39	28
45°	11	9
55°	3	3
65°	1	1
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	1488.5
1°	1486.5
2°	1477.5
3°	1463.4
4°	1444.4
5°	1421.4
6°	1394.3
7°	1359.3
8°	1321.2
9°	1276.1
10°	1226.0
11°	1169.9
12°	1109.8
13°	1047.7
14°	980.6
15°	910.5
16°	840.4
17°	771.3
18°	705.2
19°	635.1
20°	567.9
21°	499.8
22°	433.7
23°	369.6
24°	308.5
25°	258.4
27.5°	156.3
30°	94.2
32.5°	59.1
35°	39.1
37.5°	27.0
40°	20.0
42.5°	14.0
45°	11.0
47.5°	8.0
50°	6.0
52.5°	5.0
55°	3.0
57.5°	2.0
60°	1.0
62.5°	1.0
65°	1.0
67.5°	0.0
70°	0.0
72.5°	0.0



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CANDELA DISTRIBUTION (continued):

	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)