

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: P277716

Luminaire Tested: **ML4D09_D2WE - TIR45SP15 - TL43R2GORBBB - TL44S2GORBBB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P277716
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-893-1)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_D2WE - TIR45SP15 - TL43R2GORBBB - TL44S2GORBBB
Description: ML4 900LM 3000K, D2W, 15° SP OPTIC, WITH ROUND DIFFUSED CLEAR LENS, OIL RUBBED BRONZE FLANGE, BLACK LENS FRAME
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 569.6 lumens
Efficiency: N/A
Efficacy: 47.5 lumens/watt
Spacing Criteria (0/90/45): 0.46 / 0.46 / 0.47
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

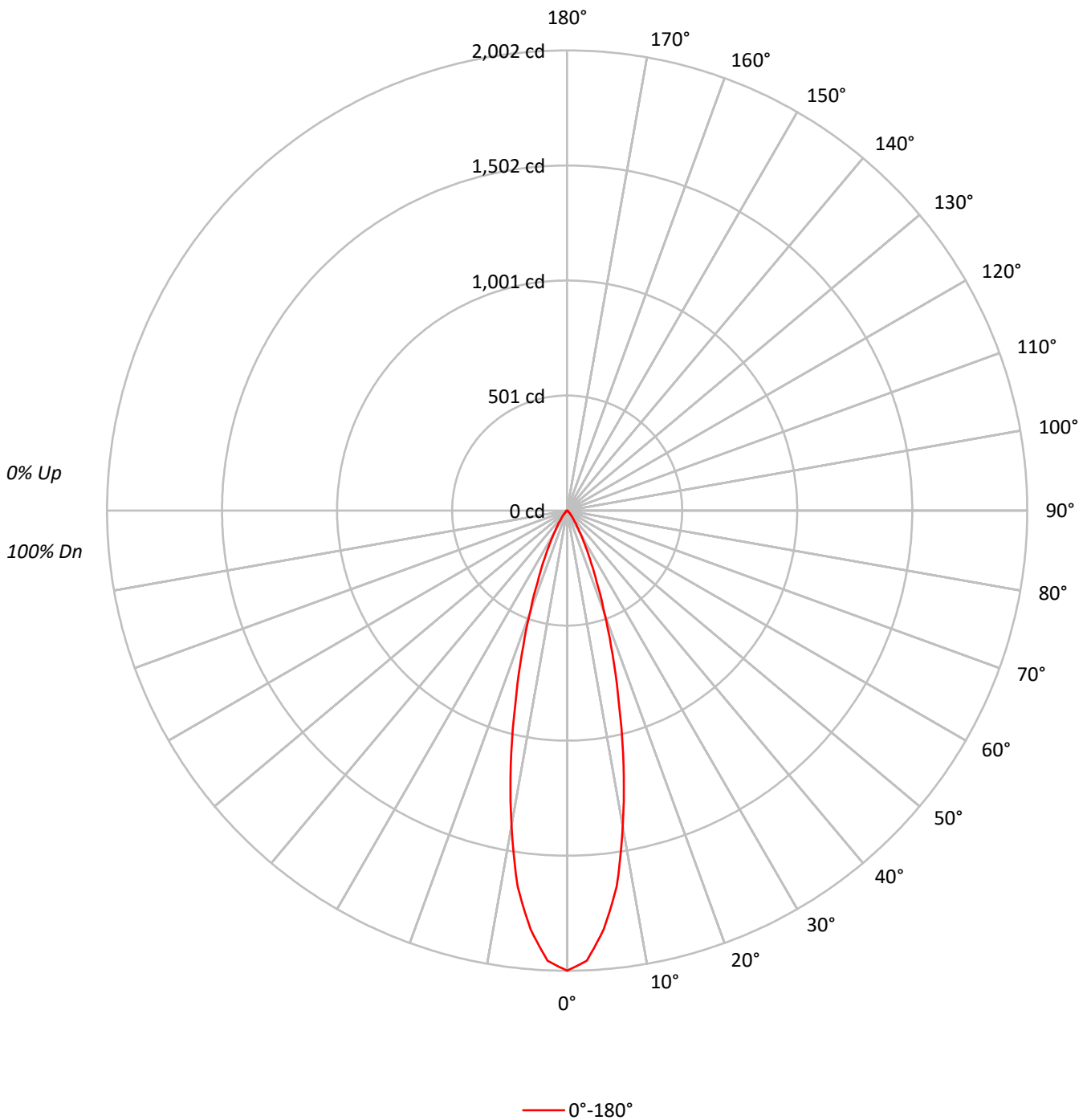
Input Watts (W): 12
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P277716

CATALOG NUMBER: ML4D09_D2WE - TIR45SP15 - TL43R2GORBBB - TL44S2GORBBB

Luminous Intensity Polar Plot





TEST NUMBER: P277716

CATALOG NUMBER: ML4D09_D2WE - TIR45SP15 - TL43R2GORBBB - TL44S2GORBBB

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	109	112	110	108	107	106	105	104	103	101	100	99	98	98	96
2	110	107	103	101	108	105	102	99	102	99	97	99	97	95	96	95	93	92
3	106	101	97	94	105	100	96	94	98	95	92	95	93	91	93	91	89	88
4	103	97	93	89	101	96	92	89	94	90	88	92	89	87	90	88	86	84
5	99	93	88	85	98	92	88	85	90	87	84	89	86	83	87	85	82	81
6	96	89	84	81	95	88	84	81	87	83	80	86	82	80	84	82	79	78
7	93	86	81	78	92	85	81	78	84	80	77	83	79	77	82	79	76	75
8	90	82	78	75	89	82	78	75	81	77	74	80	77	74	79	76	74	73
9	87	80	75	72	86	79	75	72	78	74	72	78	74	72	77	74	71	70
10	84	77	73	70	84	77	72	70	76	72	69	75	72	69	75	71	69	68

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	987647
5°	905145
10°	698481
15°	444791
20°	248556
25°	128584
30°	63864
35°	32524
40°	16746
45°	9071
50°	5373
55°	3441
60°	1974
65°	1167
70°	1443
75°	0
80°	0
85°	0



TEST NUMBER: P277716

CATALOG NUMBER: ML4D09_D2WE - TIR45SP15 - TL43R2GORBBB - TL44S2GORBBB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	161.2	28.3
10°-20°	241.0	42.3
20°-30°	114.3	20.1
30°-40°	36.5	6.4
40°-50°	11.1	2.0
50°-60°	3.7	0.6
60°-70°	1.4	0.2
70°-80°	0.4	0.1
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°	516.5	90.7
0°-40°	553.0	97.1
0°-60°	567.8	99.7
0°-90°	569.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	569.6	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2002	
5°	1828	161
15°	871	241
25°	236	114
35°	54	37
45°	13	11
55°	4	4
65°	1	1
75°	0	0
85°	0	0
90°	0	0
95°	0	0
105°	0	0
115°	0	0
125°	0	0
135°	0	0
145°	0	0
155°	0	0
165°	0	0
175°	0	0
180°	0	0



TEST NUMBER: P277716

CATALOG NUMBER: ML4D09_D2WE - TIR45SP15 - TL43R2GORBBB - TL44S2GORBBB

CANDELA DISTRIBUTION (FULL):

0°	
0°	2001.8
2.5°	1959.8
5°	1827.6
7.5°	1650.5
10°	1394.2
12.5°	1132.0
15°	870.8
17.5°	654.6
20°	473.4
22.5°	335.3
25°	236.2
27.5°	165.1
30°	112.1
32.5°	79.1
35°	54.0
37.5°	37.0
40°	26.0
42.5°	19.0
45°	13.0
47.5°	10.0
50°	7.0
52.5°	5.0
55°	4.0
57.5°	3.0
60°	2.0
62.5°	2.0
65°	1.0
67.5°	1.0
70°	1.0
72.5°	1.0
75°	0.0
77.5°	0.0
80°	0.0
82.5°	0.0
85°	0.0
87.5°	0.0
90°	0.0
92.5°	0.0
95°	0.0
97.5°	0.0
100°	0.0
102.5°	0.0
105°	0.0
107.5°	0.0
110°	0.0



TEST NUMBER: P277716

CATALOG NUMBER: ML4D09_D2WE - TIR45SP15 - TL43R2GORBBB - TL44S2GORBBB

CANDELA DISTRIBUTION (continued):

	0°
112.5°	0.0
115°	0.0
117.5°	0.0
120°	0.0
122.5°	0.0
125°	0.0
127.5°	0.0
130°	0.0
132.5°	0.0
135°	0.0
137.5°	0.0
140°	0.0
142.5°	0.0
145°	0.0
147.5°	0.0
150°	0.0
152.5°	0.0
155°	0.0
157.5°	0.0
160°	0.0
162.5°	0.0
165°	0.0
167.5°	0.0
170°	0.0
172.5°	0.0
175°	0.0
177.5°	0.0
180°	0.0

(END OF REPORT)