

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: P277702

Luminaire Tested: **ML4D09_D2WE - TIR45FL40 - TL43R2GMWWB - TL44S2GMWWB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P277702
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-893-7)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_D2WE - TIR45FL40 - TL43R2GMWWB - TL44S2GMWWB
Description: ML4 900LM 3000K, D2W, 40° FL OPTIC, WITH ROUND WITH ROUND DIFFUSED CLEAR LENS, MATTE WHITE FLANGE, WHITE LENS FRAME
Light Source: (1) HIGH LUMEN LED 90CRI / 3000K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 595.6 lumens
Efficiency: N/A
Efficacy: 49.6 lumens/watt
Spacing Criteria (0/90/45): 0.58 / 0.58 / 0.58
Luminous Opening: Circular (Dia: 0.17' x H: 0')
CIE Type: Direct

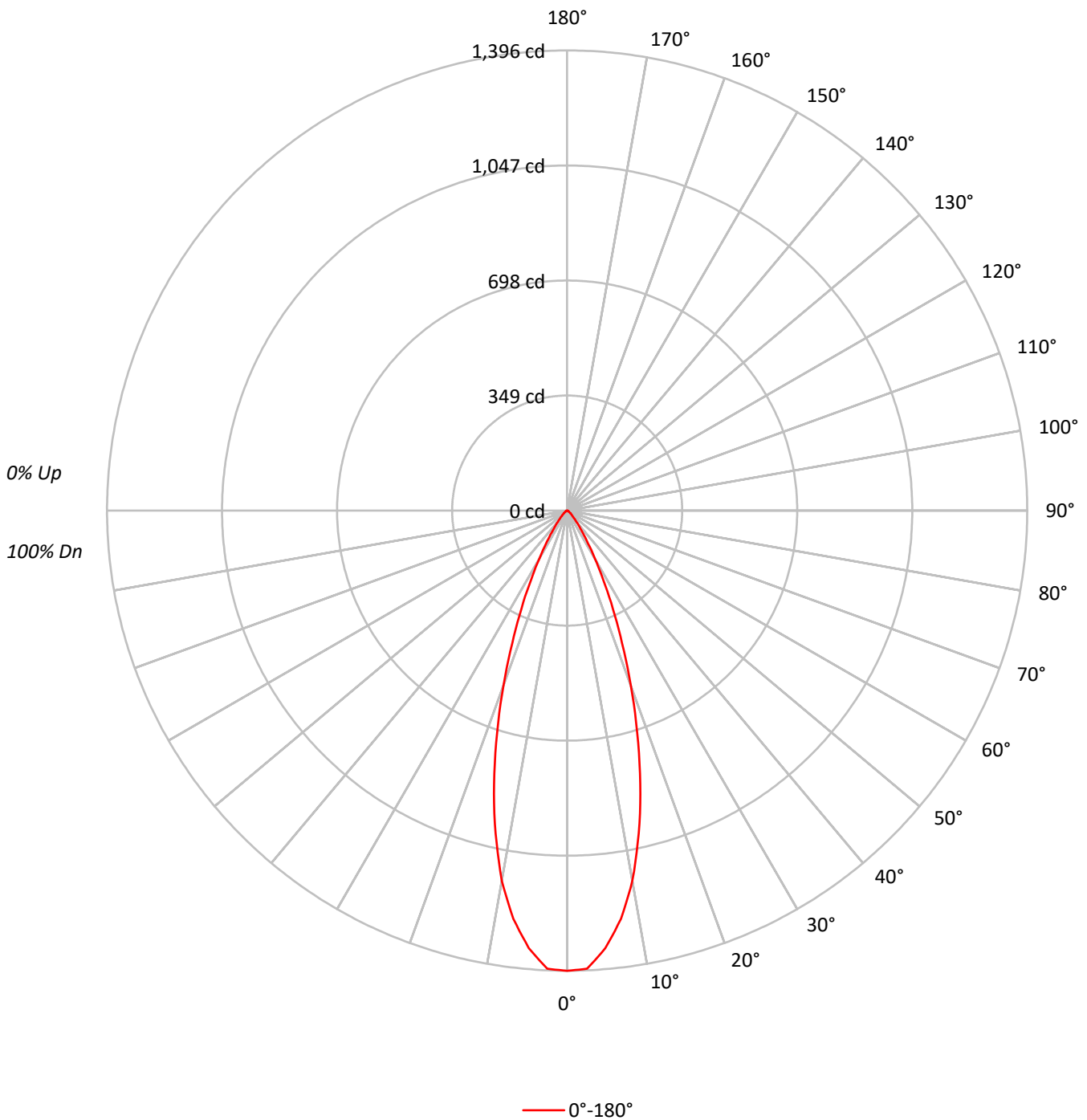
Input Watts (W): 12
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	114	112	109	107	112	109	107	106	105	104	102	102	101	99	98	97	97	95
2	109	105	101	98	107	103	100	97	100	97	95	97	95	93	95	93	91	90
3	105	99	95	91	103	98	94	91	95	92	89	93	90	88	91	88	86	85
4	101	94	89	85	99	93	88	85	91	87	84	89	86	83	87	84	82	81
5	96	89	84	81	95	88	84	80	87	83	79	85	82	79	84	81	78	77
6	93	85	80	76	91	84	79	76	83	79	75	82	78	75	80	77	74	73
7	89	81	76	72	88	81	76	72	79	75	72	78	74	72	77	74	71	70
8	86	78	73	69	85	77	72	69	76	72	69	75	71	68	74	71	68	67
9	83	74	69	66	82	74	69	66	73	69	66	72	68	65	72	68	65	64
10	80	71	67	63	79	71	66	63	70	66	63	70	66	63	69	65	63	62

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	688857
5°	659791
10°	571230
15°	438304
20°	295652
25°	178612
30°	96280
35°	49389
40°	27051
45°	16048
50°	9978
55°	6881
60°	4934
65°	3502
70°	4328
75°	3813
80°	2841
85°	5661



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.1	20.3
10°-20°	233.9	39.3
20°-30°	152.7	25.6
30°-40°	55.7	9.4
40°-50°	18.6	3.1
50°-60°	7.3	1.2
60°-70°	3.5	0.6
70°-80°	2.1	0.4
80°-90°	0.7	0.1
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°	507.7	85.2
0°-40°	563.4	94.6
0°-60°	589.3	99.0
0°-90°	595.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	595.6	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	1396	
5°	1332	121
15°	858	234
25°	328	153
35°	82	56
45°	23	19
55°	8	7
65°	3	3
75°	2	2
85°	1	1
90°	0	



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CANDELA DISTRIBUTION (FULL):

	0°
0°	1396.2
2.5°	1391.2
5°	1332.2
7.5°	1249.2
10°	1140.2
12.5°	1003.2
15°	858.1
17.5°	706.1
20°	563.1
22.5°	435.1
25°	328.1
27.5°	237.0
30°	169.0
32.5°	119.0
35°	82.0
37.5°	58.0
40°	42.0
42.5°	30.0
45°	23.0
47.5°	17.0
50°	13.0
52.5°	10.0
55°	8.0
57.5°	6.0
60°	5.0
62.5°	4.0
65°	3.0
67.5°	3.0
70°	3.0
72.5°	2.0
75°	2.0
77.5°	2.0
80°	1.0
82.5°	1.0
85°	1.0
87.5°	0.0
90°	0.0

(END OF REPORT)