

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: P300479

Luminaire Tested: **ML4D09_27D2WE - TIR45SP15 - TL43R2GMBBB - TL44S2GMBBB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P300479
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-59)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_27D2WE - TIR45SP15 - TL43R2GM BBB - TL44S2GM BBB
Description: ML4 2700K, 900LM DIM-TO-WARM, 15 DEG SP OPTIC, WITH ROUND/SQUARE
DIFFUSED CLEAR LENS, MATTE BLACK FLANGE, BLACK LENS FRAME
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 461.0 lumens
Efficiency: N/A
Efficacy: 41.2 lumens/watt
Spacing Criteria (0/90/45): 0.33 / 0.33 / 0.34
Luminous Opening: Circular (Dia: 0.19' x H: 0')
CIE Type: Direct

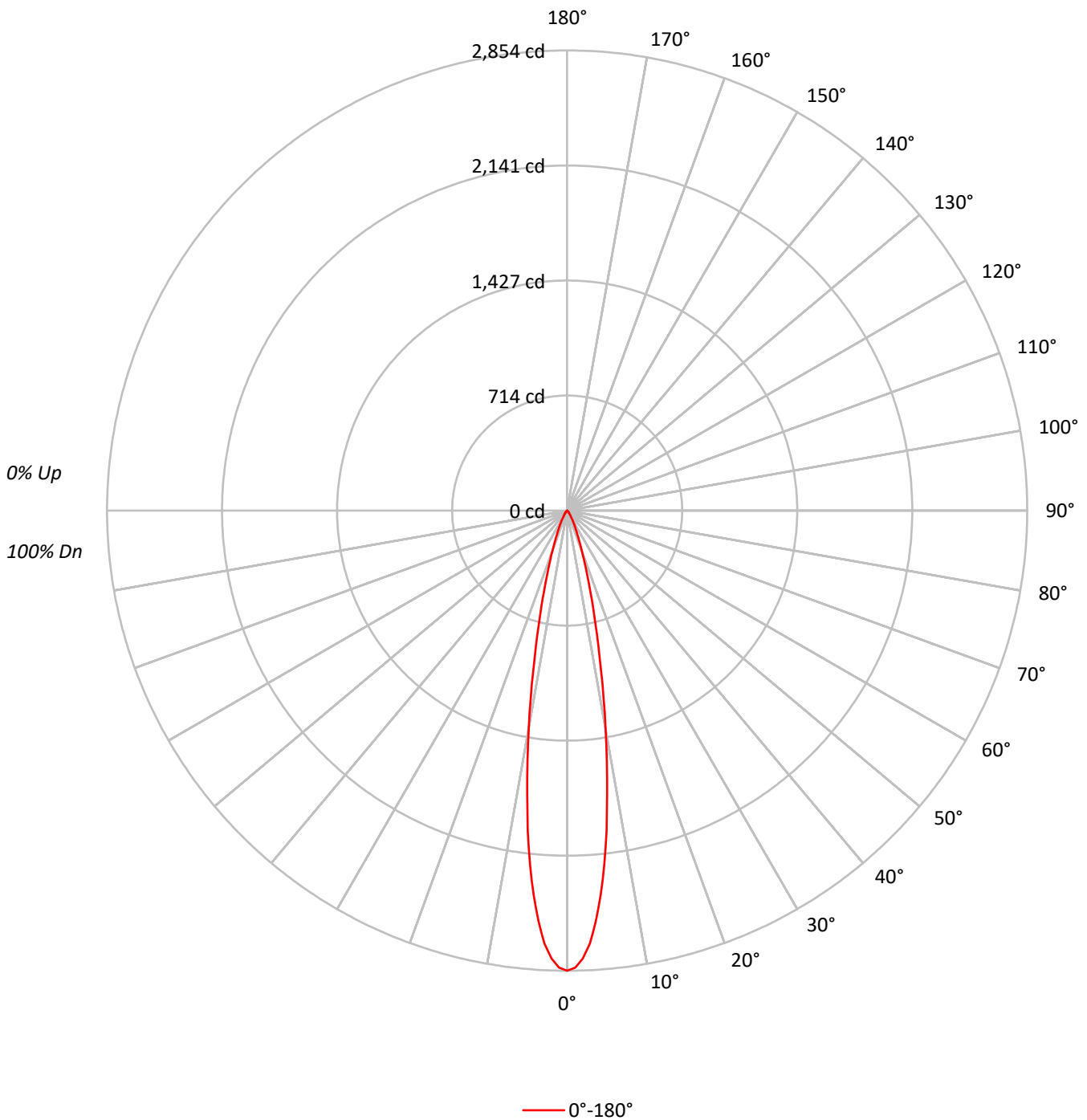
Input Watts (W): 11.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	113	111	110	113	111	109	108	107	106	105	103	102	101	100	99	99	97
2	111	108	105	103	109	106	104	101	103	101	99	100	99	97	98	96	95	94
3	108	104	100	97	106	102	99	96	100	97	95	98	95	94	95	94	92	91
4	105	100	96	93	103	99	95	92	97	94	91	95	92	90	93	91	89	88
5	102	96	92	89	101	95	92	89	94	91	88	92	90	87	91	89	87	86
6	99	93	89	86	98	92	89	86	91	88	85	90	87	85	89	86	84	83
7	97	90	86	84	96	90	86	83	89	85	83	88	85	83	87	84	82	81
8	94	88	84	81	93	87	84	81	86	83	81	86	83	80	85	82	80	79
9	92	85	82	79	91	85	81	79	84	81	79	84	81	78	83	80	78	77
10	90	83	79	77	89	83	79	77	82	79	77	82	79	77	81	78	76	75

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	1112464
5°	936080
10°	543813
15°	248931
20°	111304
25°	52992
30°	26603
35°	13801
40°	7633
45°	3859
50°	2426
55°	1359
60°	780
65°	922
70°	0
75°	0
80°	0
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.9	42.1
10°-20°	178.1	38.6
20°-30°	60.5	13.1
30°-40°	19.6	4.3
40°-50°	6.0	1.3
50°-60°	2.1	0.5
60°-70°	0.9	0.2
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°	432.4	93.8
0°-40°	452.0	98.1
0°-60°	460.1	99.8
0°-90°	461.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	461.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2854	
5°	2392	194
15°	617	178
25°	123	61
35°	29	20
45°	7	6
55°	2	2
65°	1	1
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	2853.7
1°	2834.6
2°	2780.6
3°	2689.5
4°	2553.3
5°	2392.1
6°	2206.8
7°	2002.6
8°	1777.3
9°	1574.0
10°	1373.8
11°	1181.5
12°	1009.3
13°	860.1
14°	728.9
15°	616.8
16°	517.7
17°	438.6
18°	374.5
19°	314.4
20°	268.3
21°	228.3
22°	194.2
23°	166.2
24°	142.2
25°	123.2
27.5°	85.1
30°	59.1
32.5°	41.1
35°	29.0
37.5°	21.0
40°	15.0
42.5°	10.0
45°	7.0
47.5°	5.0
50°	4.0
52.5°	3.0
55°	2.0
57.5°	2.0
60°	1.0
62.5°	1.0
65°	1.0
67.5°	1.0
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)