

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: P300497

Luminaire Tested: **ML4D09_27D2WE - TIR45NFL25 - TL43R2GBCUBB - TL44S2GBCUBB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P300497
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-7)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_27D2WE - TIR45NFL25 - TL43R2GBCUBB - TL44S2GBCUBB
Description: ML4 2700K, 900LM DIM-TO-WARM, 25 DEG NFL OPTIC, WITH ROUND/SQUARE
DIFFUSED CLEAR LENS, BRUSHED COPPER 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: 484.0 lumens
Efficiency: N/A
Efficacy: 43.2 lumens/watt
Spacing Criteria (0/90/45): 0.47 / 0.47 / 0.47
Luminous Opening: Circular (Dia: 0.19' x H: 0')
CIE Type: Direct

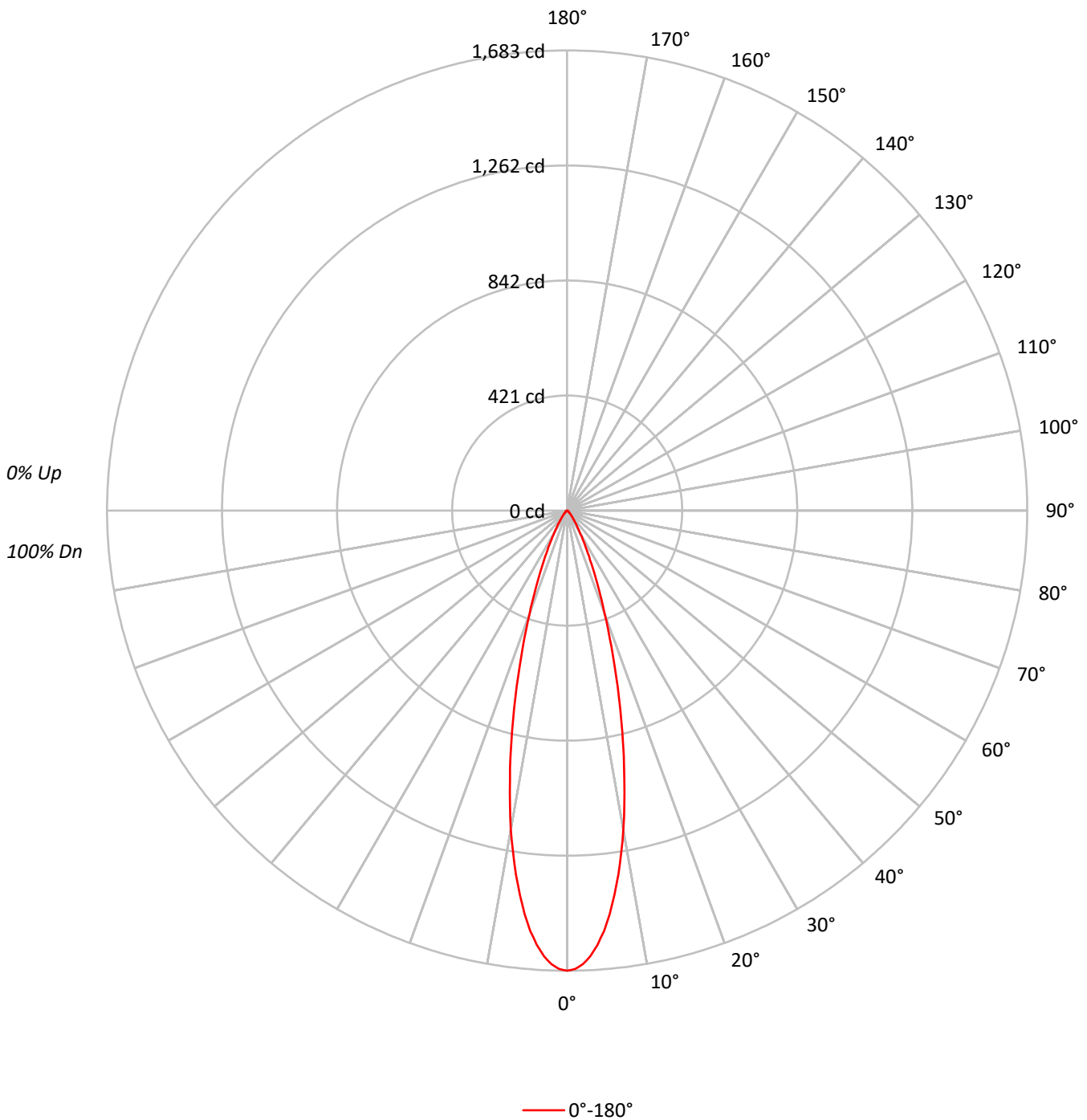
Input Watts (W): 11.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	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	91	93	91	89	88
4	103	97	92	89	101	96	92	88	94	90	87	92	89	86	90	87	85	84
5	99	92	88	85	98	92	87	84	90	86	83	88	85	83	87	84	82	81
6	96	89	84	81	94	88	84	81	87	83	80	85	82	79	84	81	79	78
7	92	85	81	77	91	85	80	77	84	80	77	82	79	76	81	78	76	75
8	89	82	78	74	88	82	77	74	81	77	74	80	76	74	79	76	73	72
9	87	79	75	72	86	79	75	72	78	74	71	77	74	71	77	73	71	70
10	84	77	72	69	83	76	72	69	76	72	69	75	71	69	74	71	69	68

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	656010
5°	604161
10°	469157
15°	302486
20°	167475
25°	85123
30°	42268
35°	22367
40°	12213
45°	7167
50°	4245
55°	2719
60°	2339
65°	1845
70°	1140
75°	0
80°	0
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.6	28.0
10°-20°	204.6	42.3
20°-30°	95.9	19.8
30°-40°	31.3	6.5
40°-50°	10.8	2.2
50°-60°	3.8	0.8
60°-70°	1.7	0.4
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°	436.0	90.1
0°-40°	467.4	96.6
0°-60°	481.9	99.6
0°-90°	484.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	484.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	1683	
5°	1544	136
15°	750	205
25°	198	96
35°	47	31
45°	13	11
55°	4	4
65°	2	2
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	1682.8
1°	1676.8
2°	1659.9
3°	1631.9
4°	1591.9
5°	1543.9
6°	1484.0
7°	1418.0
8°	1344.1
9°	1265.1
10°	1185.2
11°	1096.2
12°	1007.3
13°	920.4
14°	832.4
15°	749.5
16°	668.5
17°	593.6
18°	523.6
19°	459.7
20°	403.7
21°	352.8
22°	306.8
23°	265.8
24°	229.8
25°	197.9
27.5°	136.9
30°	93.9
32.5°	66.0
35°	47.0
37.5°	33.0
40°	24.0
42.5°	18.0
45°	13.0
47.5°	10.0
50°	7.0
52.5°	5.0
55°	4.0
57.5°	3.0
60°	3.0
62.5°	2.0
65°	2.0
67.5°	1.0
70°	1.0
72.5°	1.0



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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)