

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: P300482

Luminaire Tested: **ML4D09_27D2WE - TIR45SP15 - TL43R2GBCUBB - TL44S2GBCUBB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P300482
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-62)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_27D2WE - TIR45SP15 - TL43R2GBCUBB - TL44S2GBCUBB
Description: ML4 2700K, 900LM DIM-TO-WARM, 15 DEG SP 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: 455.0 lumens
Efficiency: N/A
Efficacy: 40.6 lumens/watt
Spacing Criteria (0/90/45): 0.36 / 0.36 / 0.38
Luminous Opening: Circular (Dia: 0.19' x H: 0')
CIE Type: Direct

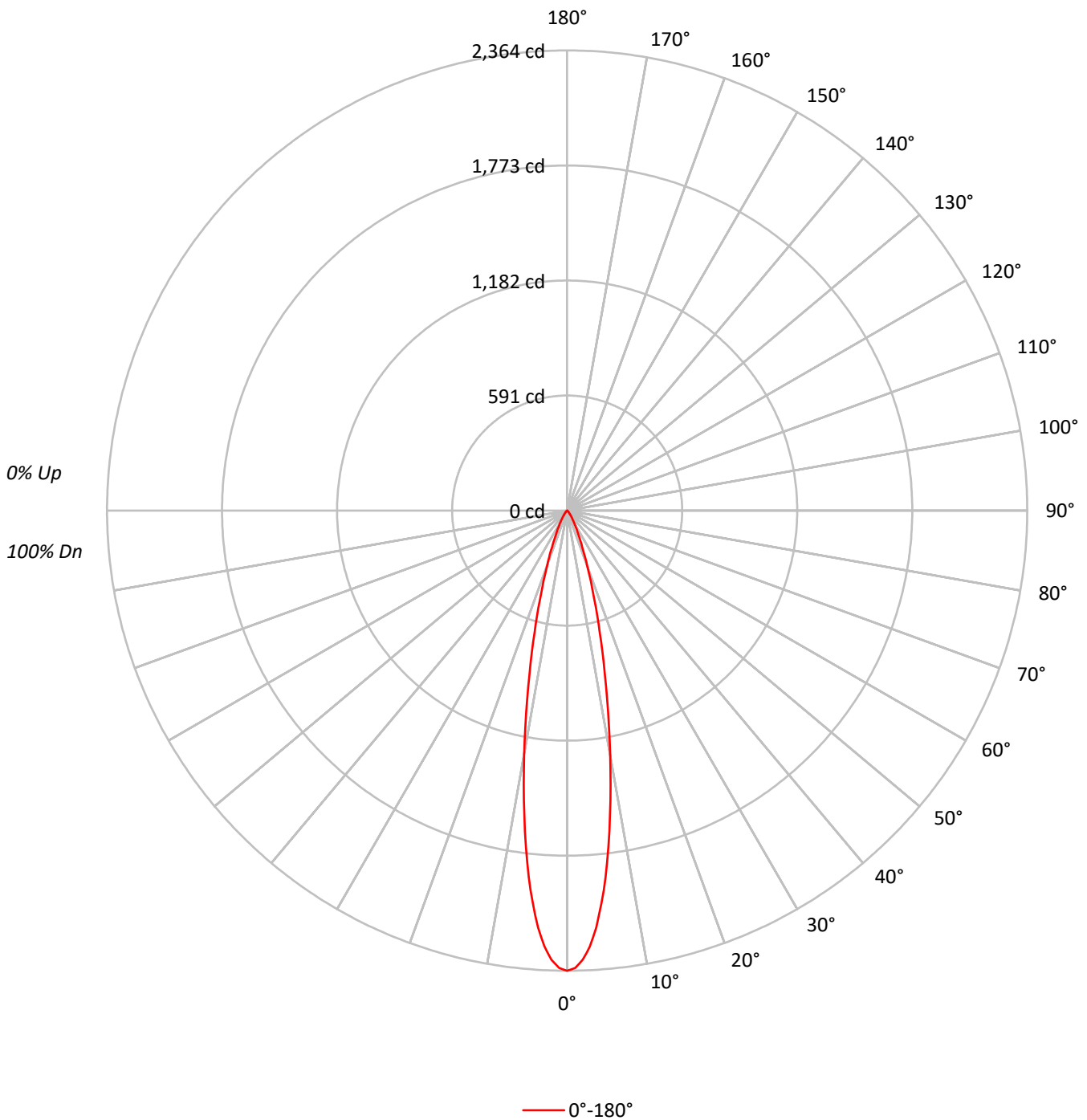
Input Watts (W): 11.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	113	111	109	113	111	109	107	107	105	104		103	102	101		100	99	98	96
2	111	107	104	102	109	106	103	101	103	100	98		100	98	96		97	96	94	93
3	107	103	99	96	106	101	98	95	99	96	94		97	94	92		94	93	91	90
4	104	99	95	91	102	97	94	91	95	92	90		94	91	89		92	90	88	87
5	101	95	91	88	99	94	90	87	92	89	86		91	88	86		89	87	85	84
6	98	92	87	84	97	91	87	84	89	86	83		88	85	83		87	84	82	81
7	95	89	84	81	94	88	84	81	87	83	81		86	83	80		85	82	80	79
8	92	86	82	79	91	85	81	79	84	81	78		83	80	78		83	80	78	77
9	90	83	79	76	89	83	79	76	82	78	76		81	78	76		81	78	76	75
10	88	81	77	74	87	81	77	74	80	76	74		79	76	74		79	76	74	73

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	921603
5°	792504
10°	504110
15°	261038
20°	123999
25°	60176
30°	30159
35°	15705
40°	8651
45°	4962
50°	3032
55°	2039
60°	1559
65°	922
70°	1140
75°	0
80°	0
85°	0



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	168.2	37.0
10°-20°	183.2	40.3
20°-30°	69.0	15.2
30°-40°	22.3	4.9
40°-50°	7.4	1.6
50°-60°	3.0	0.7
60°-70°	1.4	0.3
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°	420.5	92.4
0°-40°	442.8	97.3
0°-60°	453.3	99.6
0°-90°	455.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	455.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2364	
5°	2025	168
15°	647	183
25°	140	69
35°	33	22
45°	9	7
55°	3	3
65°	1	1
75°	0	0
85°	0	0
90°	0	



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CANDELA DISTRIBUTION (FULL):

0°	
0°	2364.1
1°	2350.1
2°	2308.1
3°	2241.2
4°	2146.2
5°	2025.2
6°	1893.3
7°	1740.3
8°	1583.4
9°	1426.5
10°	1273.5
11°	1125.6
12°	989.6
13°	861.7
14°	749.7
15°	646.8
17.5°	441.8
20°	298.9
22.5°	202.9
25°	139.9
27.5°	97.0
30°	67.0
32.5°	47.0
35°	33.0
37.5°	24.0
40°	17.0
42.5°	12.0
45°	9.0
47.5°	7.0
50°	5.0
52.5°	4.0
55°	3.0
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



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CANDELA DISTRIBUTION (continued):

90° | $\frac{0^\circ}{0.0}$

(END OF REPORT)