

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: P300477

Luminaire Tested: **ML4D09_27D2WE - TIR45SP15 - TL43R2GMWWB - TL44S2GMWWB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P300477
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-57)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_27D2WE - TIR45SP15 - TL43R2GMWWB - TL44S2GMWWB
Description: ML4 2700K, 900LM DIM-TO-WARM, 15 DEG SP OPTIC, WITH ROUND/SQUARE
DIFFUSED CLEAR LENS, MATTE WHITE FLANGE, WHITE LENS FRAME
Light Source: (1) HIGH LUMEN LED 90CRI / 2700K CCT
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 463.0 lumens
Efficiency: N/A
Efficacy: 41.3 lumens/watt
Spacing Criteria (0/90/45): 0.33 / 0.33 / 0.35
Luminous Opening: Circular (Dia: 0.19' x H: 0')
CIE Type: Direct

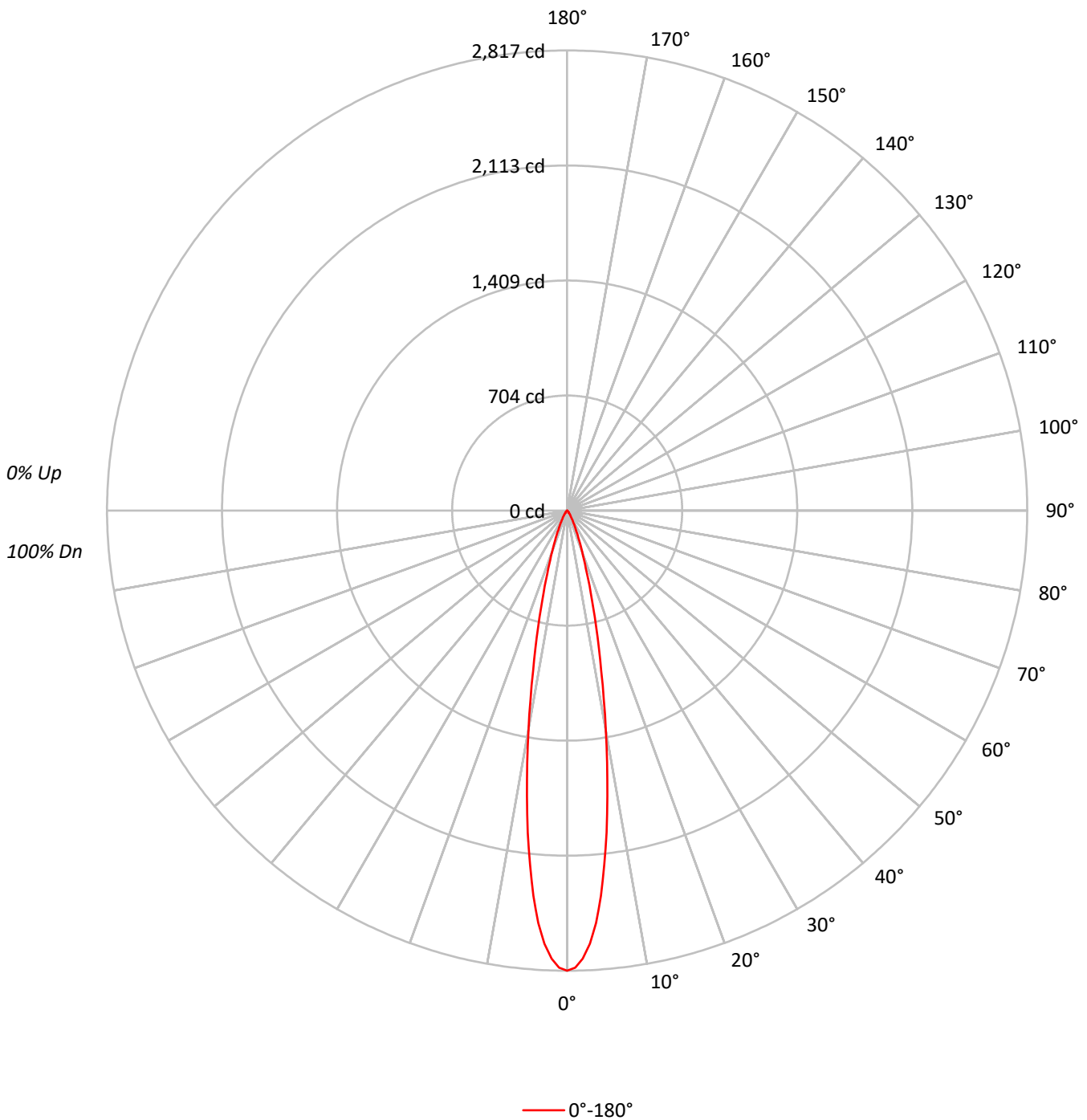
Input Watts (W): 11.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P300477

CATALOG NUMBER: ML4D09_27D2WE - TIR45SP15 - TL43R2GMWWB - TL44S2GMWWB

Luminous Intensity Polar Plot





TEST NUMBER: P300477

CATALOG NUMBER: ML4D09_27D2WE - TIR45SP15 - TL43R2GMWWB - TL44S2GMWWB

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

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	1098080
5°	926375
10°	540884
15°	248446
20°	110890
25°	52519
30°	26603
35°	13801
40°	7633
45°	4410
50°	3032
55°	2039
60°	1559
65°	1845
70°	1140
75°	1506
80°	2245
85°	0



TEST NUMBER: P300477

CATALOG NUMBER: ML4D09_27D2WE - TIR45SP15 - TL43R2GMWWB - TL44S2GMWWB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.0	41.5
10°-20°	178.1	38.5
20°-30°	60.5	13.1
30°-40°	19.6	4.2
40°-50°	6.7	1.4
50°-60°	3.0	0.6
60°-70°	1.6	0.3
70°-80°	1.1	0.2
80°-90°	0.4	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°	430.6	93.0
0°-40°	450.2	97.2
0°-60°	459.9	99.3
0°-90°	463.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	463.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	2817	
5°	2367	192
15°	616	178
25°	122	61
35°	29	20
45°	8	7
55°	3	3
65°	2	2
75°	1	1
85°	0	0
90°	0	



TEST NUMBER: P300477

CATALOG NUMBER: ML4D09_27D2WE - TIR45SP15 - TL43R2GMWWB - TL44S2GMWWB

CANDELA DISTRIBUTION (FULL):

0°	
0°	2816.8
1°	2797.8
2°	2744.7
3°	2655.6
4°	2530.5
5°	2367.3
6°	2178.2
7°	1986.0
8°	1764.8
9°	1561.5
10°	1366.4
11°	1178.2
12°	1004.0
13°	863.9
14°	729.7
15°	615.6
16°	521.5
17°	443.4
18°	371.4
19°	317.3
20°	267.3
21°	229.2
22°	195.2
23°	166.2
24°	143.1
25°	122.1
27.5°	85.1
30°	59.1
32.5°	41.0
35°	29.0
37.5°	21.0
40°	15.0
42.5°	11.0
45°	8.0
47.5°	6.0
50°	5.0
52.5°	4.0
55°	3.0
57.5°	3.0
60°	2.0
62.5°	2.0
65°	2.0
67.5°	1.0
70°	1.0
72.5°	1.0



TEST NUMBER: P300477

CATALOG NUMBER: ML4D09_27D2WE - TIR45SP15 - TL43R2GMWWB - TL44S2GMWWB

CANDELA DISTRIBUTION (continued):

	0°
75°	1.0
77.5°	1.0
80°	1.0
82.5°	1.0
85°	0.0
87.5°	0.0
90°	0.0

(END OF REPORT)