

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: P300495

Luminaire Tested: **ML4D09_27D2WE - TIR45NFL25 - TL43R2GBNBB - TL44S2GBNBB**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P300495
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-1902-156-5)
Test Lab: INNOVATION CENTER(G1)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: HALO
Catalog Number: ML4D09_27D2WE - TIR45NFL25 - TL43R2GBNBB - TL44S2GBNBB
Description: ML4 2700K, 900LM DIM-TO-WARM, 25 DEG NFL OPTIC, WITH ROUND/SQUARE
DIFFUSED CLEAR LENS, BRUSH NICKEL 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: 486.0 lumens
Efficiency: N/A
Efficacy: 43.4 lumens/watt
Spacing Criteria (0/90/45): 0.46 / 0.46 / 0.47
Luminous Opening: Circular (Dia: 0.19' x H: 0')
CIE Type: Direct

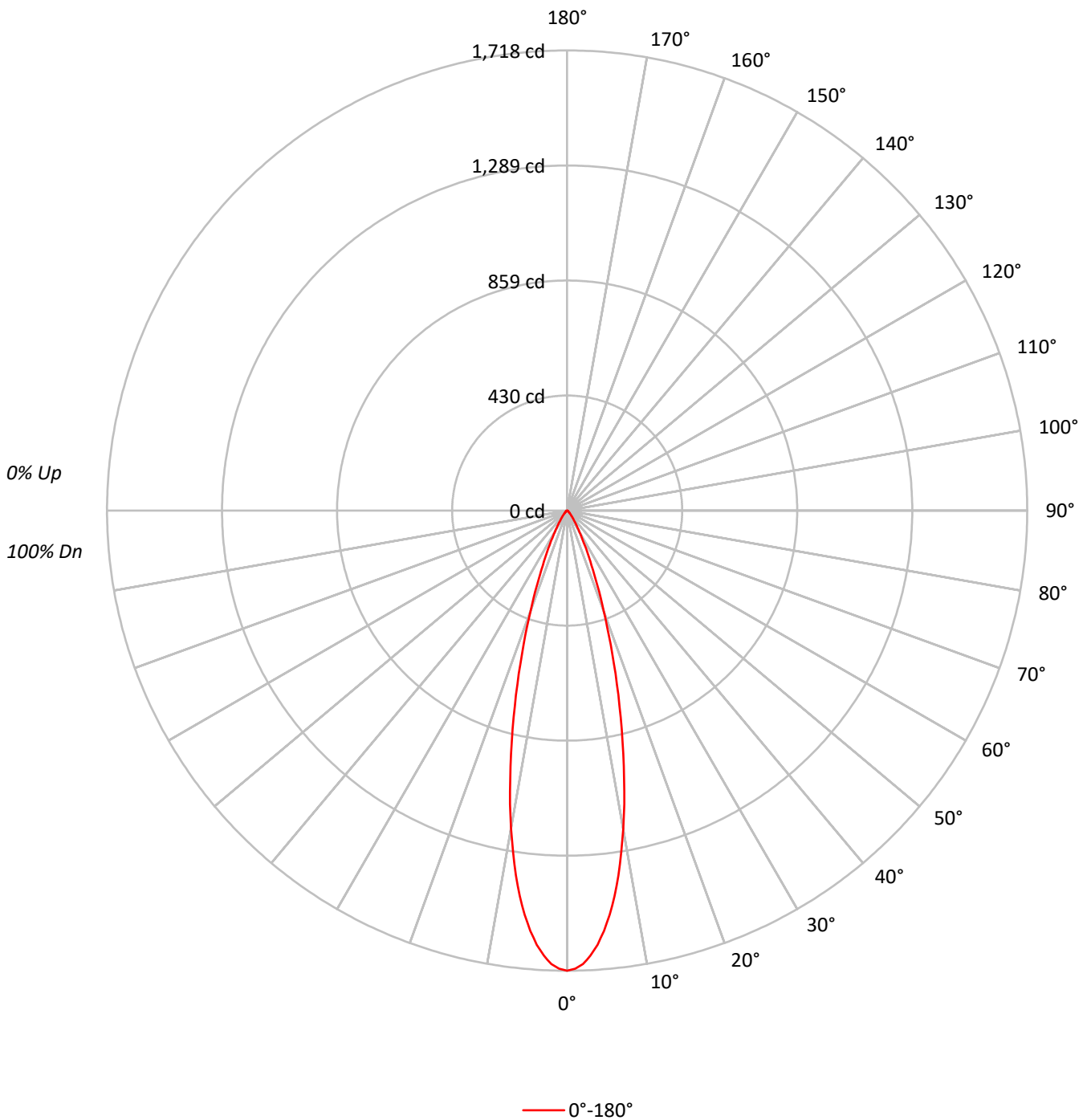
Input Watts (W): 11.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P300495

CATALOG NUMBER: ML4D09_27D2WE - TIR45NFL25 - TL43R2GBNBB - TL44S2GBNBB

Luminous Intensity Polar Plot





TEST NUMBER: P300495

CATALOG NUMBER: ML4D09_27D2WE - TIR45NFL25 - TL43R2GBNBB - TL44S2GBNBB

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	105	100	96	93	97	94	92		95	93	91		93	91	89	88
4	103	97	92	89	101	96	92	89	94	90	88		92	89	87		90	88	86	84
5	99	93	88	85	98	92	88	84	90	86	84		89	85	83		87	84	82	81
6	96	89	84	81	94	88	84	81	87	83	80		86	82	80		84	81	79	78
7	93	86	81	78	91	85	81	77	84	80	77		83	79	77		82	79	76	75
8	90	82	78	75	89	82	78	75	81	77	74		80	77	74		79	76	74	73
9	87	80	75	72	86	79	75	72	78	74	72		78	74	72		77	74	71	70
10	84	77	73	70	84	77	72	70	76	72	69		75	72	69		75	71	69	68

AVERAGE LUMINANCE (cd/sqm):

	0°
0°	669693
5°	616331
10°	477470
15°	304504
20°	165816
25°	83403
30°	41368
35°	21415
40°	12213
45°	7167
50°	4245
55°	2719
60°	2339
65°	1845
70°	1140
75°	1506
80°	0
85°	0



TEST NUMBER: P300495

CATALOG NUMBER: ML4D09_27D2WE - TIR45NFL25 - TL43R2GBNBB - TL44S2GBNBB

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.4	28.5
10°-20°	206.5	42.5
20°-30°	93.9	19.3
30°-40°	30.4	6.3
40°-50°	10.6	2.2
50°-60°	3.8	0.8
60°-70°	1.7	0.4
70°-80°	0.7	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°	438.9	90.3
0°-40°	469.3	96.6
0°-60°	483.6	99.5
0°-90°	486.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	486.0	100.0

CANDELA DISTRIBUTION:

	0°	Flux
0°	1718	
5°	1575	138
15°	754	207
25°	194	94
35°	45	30
45°	13	11
55°	4	4
65°	2	2
75°	1	1
85°	0	0
90°	0	



TEST NUMBER: P300495

CATALOG NUMBER: ML4D09_27D2WE - TIR45NFL25 - TL43R2GBNBB - TL44S2GBNBB

CANDELA DISTRIBUTION (FULL):

0°	
0°	1717.9
1°	1710.9
2°	1693.9
3°	1663.9
4°	1625.0
5°	1575.0
6°	1517.0
7°	1450.1
8°	1375.1
9°	1291.2
10°	1206.2
11°	1117.3
12°	1023.4
13°	932.4
14°	841.5
15°	754.5
16°	674.6
17°	595.6
18°	525.7
19°	459.7
20°	399.7
21°	348.8
22°	300.8
23°	259.8
24°	223.9
25°	193.9
27.5°	132.9
30°	91.9
32.5°	64.0
35°	45.0
37.5°	32.0
40°	24.0
42.5°	17.0
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



TEST NUMBER: P300495

CATALOG NUMBER: ML4D09_27D2WE - TIR45NFL25 - TL43R2GBNBB - TL44S2GBNBB

CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)