

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: P189481

Luminaire Tested: **ML4D09NFL935-TIR50WFL55-TL43R2G\_X\_TL44S2GX**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P189481  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P189407)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ML4D09NFL935-TIR50WFL55-TL43R2G\_X\_TL44S2GX  
Description: ML4 RECESSED DOWNLIGHT WITH 55° WIDE FLOOD OPTIC WITH LENSED ROUND (OR SQUARE)  
Light Source: CITIZEN 3500K  
CLU711  
Ballast/Driver: UNV-120-277 ELECTRONIC DRIVER

**Summary**

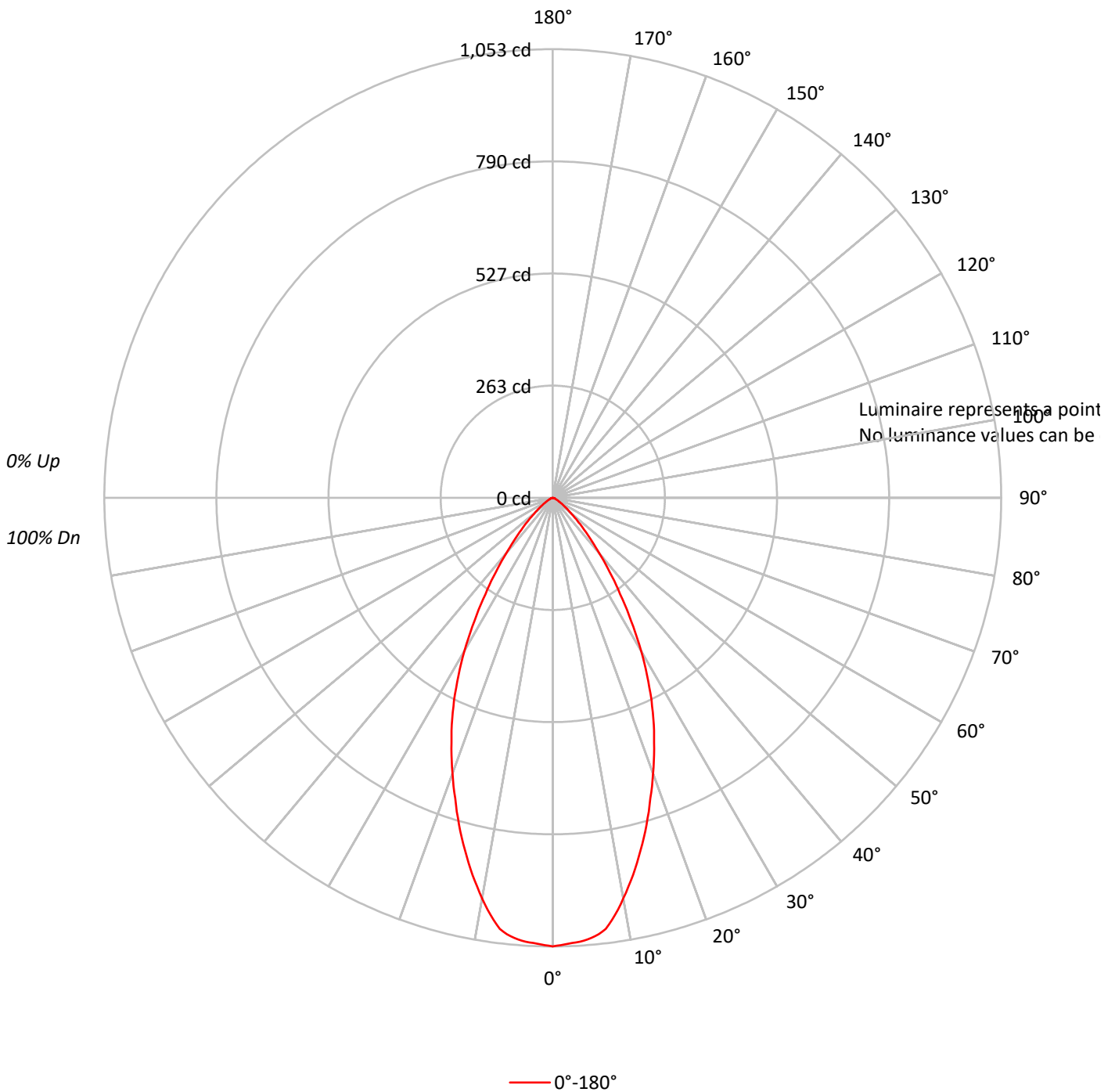
Lumens per Lamp: N/A  
Luminaire Lumens: 873.8 lumens  
Efficiency: N/A  
Efficacy: 73.1 lumens/watt  
Spacing Criteria (0/90/45): 0.78 / 0.78 / 0.82  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct  
  
Input Watts (W): 11.95  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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: P189481

CATALOG NUMBER: ML4D09NFL935-TIR50WFL55-TL43R2G\_X\_TL44S2GX

### Luminous Intensity Polar Plot





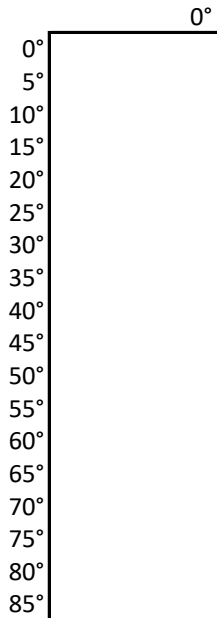
TEST NUMBER: P189481

CATALOG NUMBER: ML4D09NFL935-TIR50WFL55-TL43R2G\_X\_TL44S2GX

**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	113	110	108	105	111	108	106	104	104	102	100		100	99	97		97	96	95	93
2	107	102	98	94	105	100	97	93	97	94	91		94	92	89		91	89	87	86
3	101	95	90	85	99	93	89	85	91	87	83		88	85	82		86	83	81	79
4	96	88	82	78	94	87	82	77	85	80	77		83	79	76		81	78	75	73
5	91	82	76	72	89	81	76	71	79	74	71		78	73	70		76	72	69	68
6	86	77	71	66	85	76	70	66	75	69	66		73	69	65		72	68	65	63
7	82	72	66	62	80	71	66	61	70	65	61		69	64	61		68	64	60	59
8	78	68	62	57	76	67	61	57	66	61	57		65	60	57		64	60	57	55
9	74	64	58	54	73	63	58	54	63	57	54		62	57	53		61	56	53	52
10	70	60	55	51	69	60	54	50	59	54	50		58	54	50		58	53	50	49

**AVERAGE LUMINANCE (cd/sqm):**





TEST NUMBER: P189481

CATALOG NUMBER: ML4D09NFL935-TIR50WFL55-TL43R2G\_X\_TL44S2GX

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	96.5	11.0
10°-20°	229.5	26.3
20°-30°	252.5	28.9
30°-40°	174.4	20.0
40°-50°	79.4	9.1
50°-60°	28.3	3.2
60°-70°	9.4	1.1
70°-80°	3.1	0.4
80°-90°	0.7	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°	578.5	66.2
0°-40°	752.9	86.2
0°-60°	860.6	98.5
0°-90°	873.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	873.8	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	1053	
5°	1037	97
15°	826	229
25°	555	252
35°	276	174
45°	99	79
55°	30	28
65°	9	9
75°	3	3
85°	1	1
90°	0	



TEST NUMBER: P189481

CATALOG NUMBER: ML4D09NFL935-TIR50WFL55-TL43R2G\_X\_TL44S2GX

**CANDELA DISTRIBUTION (FULL):**

0°	
0°	1052.9
1°	1050.0
2°	1047.0
3°	1045.0
4°	1042.0
5°	1037.0
6°	1030.1
7°	1019.2
8°	1000.4
9°	978.6
10°	954.8
11°	930.0
12°	905.2
13°	879.4
14°	852.6
15°	825.9
16°	798.2
17°	770.4
18°	741.6
19°	715.8
20°	688.1
21°	662.3
22°	635.6
23°	608.7
24°	583.0
25°	555.2
26°	528.5
27°	499.7
28°	472.0
29°	443.2
30°	414.4
32.5°	342.1
35°	275.6
37.5°	220.1
40°	169.5
42.5°	130.9
45°	99.1
47.5°	74.4
50°	54.6
52.5°	40.7
55°	29.8
57.5°	21.8
60°	15.9
62.5°	11.9
65°	8.9



TEST NUMBER: P189481

CATALOG NUMBER: ML4D09NFL935-TIR50WFL55-TL43R2G\_X\_TL44S2GX

**CANDELA DISTRIBUTION (continued):**

	0°
67.5°	6.9
70°	5.0
72.5°	4.0
75°	3.0
77.5°	1.9
80°	1.0
82.5°	1.0
85°	1.0
87.5°	0.0
90°	0.0

(END OF REPORT)