

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: P189467

Luminaire Tested: **ML4D09NFL927-TIR50NFL25-TL43R2G\_X\_ TL44S2GX**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P189467  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P189395)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: HALO  
Catalog Number: ML4D09NFL927-TIR50NFL25-TL43R2G\_X\_TL44S2GX  
Description: ML4 RECESSED DOWNLIGHT WITH 25° NARROW FLOOD OPTIC WITH LENSED ROUND (OR SQUARE)  
Light Source: CITIZEN 2700K  
CLU711  
Ballast/Driver: UNV-120-277 ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 866.8 lumens  
Efficiency: N/A  
Efficacy: 70.5 lumens/watt  
Spacing Criteria (0/90/45): 0.39 / 0.39 / 0.37  
Luminous Opening: Point Source (0' x 0' x 0')  
CIE Type: Direct

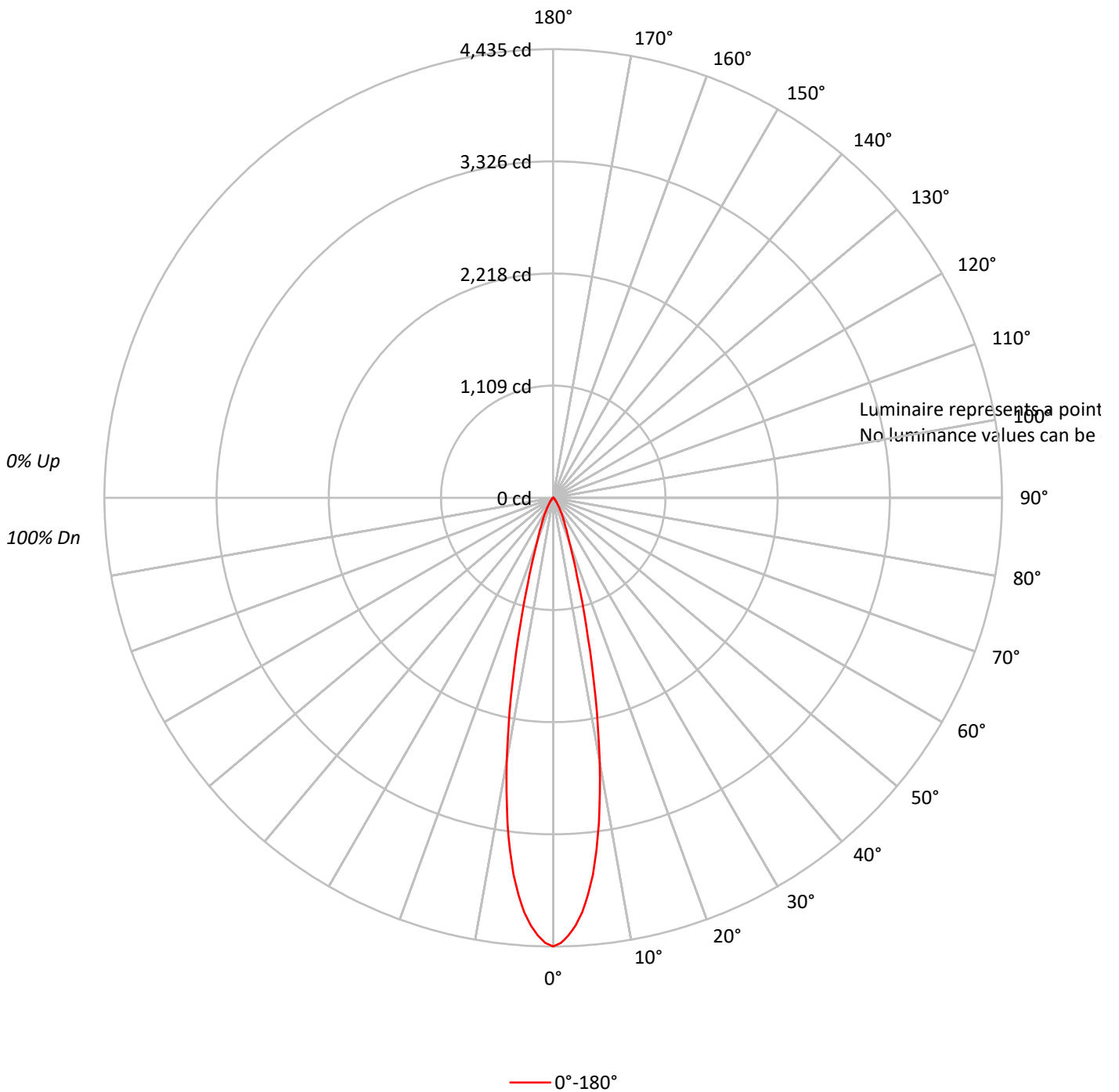
Input Watts (W): 12.3  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





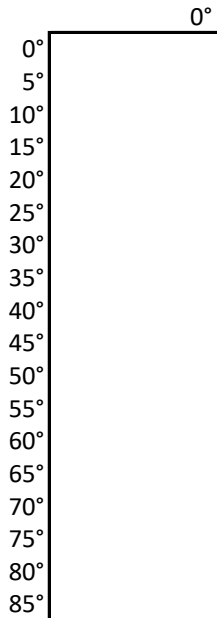
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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

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	112	111	109	107	107	105	104		103	102	101		100	99	98	96
2	111	107	104	102	109	106	103	100	102	100	98		100	98	96		97	96	94	93
3	107	103	99	96	106	101	98	95	99	96	94		96	94	92		94	92	91	90
4	104	98	94	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	90	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	93	86	82	79	92	85	81	79	85	81	78		84	80	78		83	80	78	77
9	90	83	79	77	89	83	79	76	82	79	76		82	78	76		81	78	76	75
10	88	81	77	74	87	81	77	74	80	77	74		80	76	74		79	76	74	73

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





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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	334.3	38.6
10°-20°	340.2	39.2
20°-30°	118.2	13.6
30°-40°	45.4	5.2
40°-50°	15.7	1.8
50°-60°	5.9	0.7
60°-70°	3.4	0.4
70°-80°	2.5	0.3
80°-90°	1.2	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°	792.7	91.4
0°-40°	838.1	96.7
0°-60°	859.7	99.2
0°-90°	866.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	866.8	100.0

**CANDELA DISTRIBUTION:**

	0°	Flux
0°	4435	
5°	3941	334
15°	1178	340
25°	249	118
35°	68	45
45°	18	16
55°	6	6
65°	4	3
75°	3	2
85°	1	1
90°	0	



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**CANDELA DISTRIBUTION (FULL):**

0°	
0°	4435.1
1°	4400.2
2°	4329.5
3°	4233.0
4°	4107.9
5°	3940.7
6°	3743.9
7°	3511.4
8°	3242.0
9°	2947.9
10°	2639.1
11°	2320.1
12°	2003.9
13°	1699.6
14°	1423.0
15°	1178.4
16°	973.4
17°	804.3
18°	665.5
19°	559.8
20°	477.1
21°	410.8
22°	358.5
23°	316.2
24°	279.4
25°	249.1
26°	220.6
27°	194.9
28°	170.9
29°	149.8
30°	131.4
32.5°	94.7
35°	68.0
37.5°	49.7
40°	36.8
42.5°	26.7
45°	18.4
47.5°	13.8
50°	10.1
52.5°	7.4
55°	6.4
57.5°	5.5
60°	4.6
62.5°	3.7
65°	3.7



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**CANDELA DISTRIBUTION (continued):**

	0°
67.5°	2.7
70°	2.7
72.5°	2.7
75°	2.7
77.5°	1.8
80°	1.8
82.5°	1.8
85°	0.9
87.5°	0.9
90°	0.0

(END OF REPORT)