

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: P184170

Luminaire Tested: **24FR-50-HP-UNV-L835-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P184170  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P27148)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24FR-50-HP-UNV-L835-CD1-U  
Description: METALUX 2X4 FR TROFFER LED HIGH EFFICIENCY FIXTURE  
  
Light Source: EATON LED 3500K  
Ballast/Driver: OSRAM ELECTRONIC DRIVER

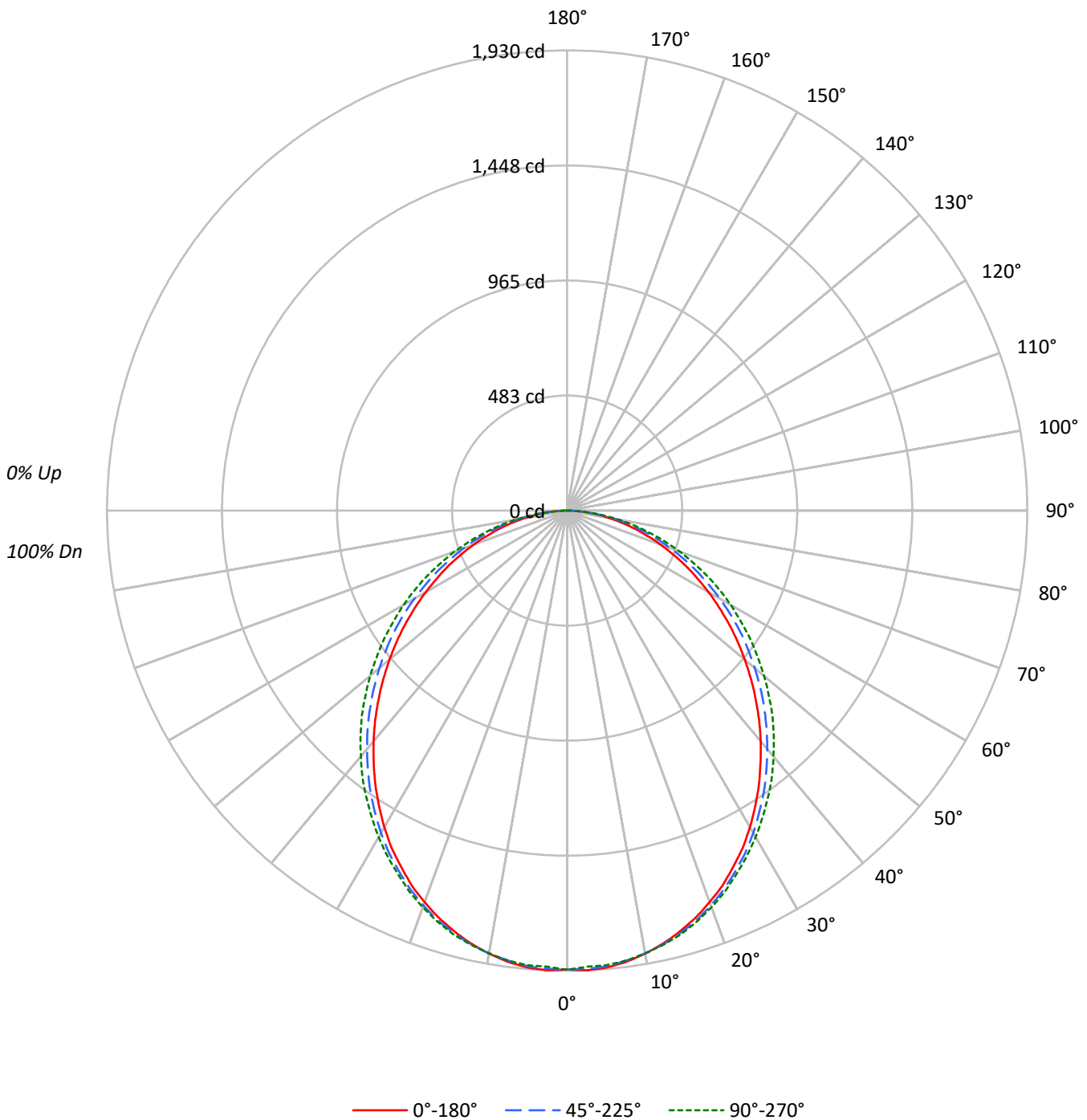
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5090.0 lumens  
Efficiency: N/A  
Efficacy: 126.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.22 / 1.32  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 40.2  
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



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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	109	104	100	96	106	102	98	94	98	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70
3	90	80	72	65	88	78	71	65	75	69	64	73	67	63	70	65	61	59
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	63	57	53	51
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

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

	0°	45°	90°
0°	2590	2590	2590
5°	2598	2591	2584
10°	2578	2576	2576
15°	2545	2554	2564
20°	2502	2523	2535
25°	2446	2479	2496
30°	2382	2426	2457
35°	2303	2363	2412
40°	2218	2294	2364
45°	2128	2223	2318
50°	2036	2150	2258
55°	1943	2079	2199
60°	1844	1992	2135
65°	1749	1902	2060
70°	1638	1815	1972
75°	1519	1717	1855
80°	1389	1595	1698
85°	1255	1359	1359



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	181.8	3.6
10°-20°	516.4	10.1
20°-30°	766.6	15.1
30°-40°	897.1	17.6
40°-50°	900.4	17.7
50°-60°	788.7	15.5
60°-70°	592.0	11.6
70°-80°	347.9	6.8
80°-90°	99.2	1.9
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°	1464.8	28.8
0°-40°	2361.8	46.4
0°-60°	4050.9	79.6
0°-90°	5090.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5090.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1925	1925	1925	1925	1925	
5°	1923	1910	1918	1915	1914	182
15°	1827	1820	1834	1839	1840	515
25°	1648	1648	1670	1674	1681	759
35°	1402	1407	1439	1457	1469	876
45°	1118	1132	1168	1200	1218	863
55°	828	843	886	918	938	740
65°	549	564	597	629	647	544
75°	292	309	330	347	357	310
85°	81	86	88	88	88	91
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1925.1	1925.1	1925.1	1925.1	1925.1
2.5°	1930.1	1918.4	1923.4	1921.8	1915.1
5°	1923.4	1910.1	1918.4	1915.1	1913.5
7.5°	1908.5	1895.2	1903.5	1903.5	1903.5
10°	1886.9	1877.0	1885.3	1885.3	1885.3
12.5°	1860.4	1852.1	1863.7	1865.3	1865.3
15°	1827.2	1820.5	1833.8	1838.8	1840.4
17.5°	1790.7	1785.7	1802.3	1807.3	1807.3
20°	1747.5	1744.2	1762.4	1767.4	1770.7
22.5°	1702.7	1697.7	1719.3	1722.6	1729.3
25°	1647.9	1647.9	1669.5	1674.5	1681.1
27.5°	1594.8	1593.2	1618.1	1626.4	1633.0
30°	1533.4	1533.4	1561.6	1573.3	1581.6
32.5°	1468.7	1473.7	1500.2	1515.2	1525.1
35°	1402.3	1407.3	1438.8	1457.1	1468.7
37.5°	1332.6	1340.9	1372.5	1395.7	1410.6
40°	1262.9	1274.5	1306.1	1332.6	1345.9
42.5°	1191.6	1201.5	1238.0	1267.9	1282.8
45°	1118.5	1131.8	1168.3	1199.9	1218.1
47.5°	1045.5	1062.1	1098.6	1133.5	1146.8
50°	972.5	987.4	1027.3	1062.1	1078.7
52.5°	899.5	914.4	955.9	989.1	1005.7
55°	828.1	843.1	886.2	917.7	937.6
57.5°	755.1	771.7	813.2	846.4	861.3
60°	685.4	700.3	740.2	773.4	793.3
62.5°	615.7	632.3	667.1	702.0	720.2
65°	549.3	564.2	597.4	629.0	647.2
67.5°	481.3	499.5	527.7	559.3	572.5
70°	416.5	436.5	461.4	487.9	501.2
72.5°	353.5	371.7	395.0	416.5	428.2
75°	292.1	308.7	330.3	346.8	356.8
77.5°	234.0	252.3	267.2	282.1	287.1
80°	179.2	194.2	205.8	215.7	219.1
82.5°	129.4	139.4	144.4	152.7	154.3
85°	81.3	86.3	88.0	88.0	88.0
87.5°	34.9	36.5	33.2	26.6	24.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)