

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: P182390

Luminaire Tested: **24FR-65-UNV-L830-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P182390  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P26767)  
Test Lab: INNOVATION CENTER-P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24FR-65-UNV-L830-CD1-U  
Description: METALUX 2X4 FR TROFFER LED FIXTURE  
  
Light Source: EATON LED 3000K  
Ballast/Driver: OSRAM ELECTRONIC DRIVER

**Summary**

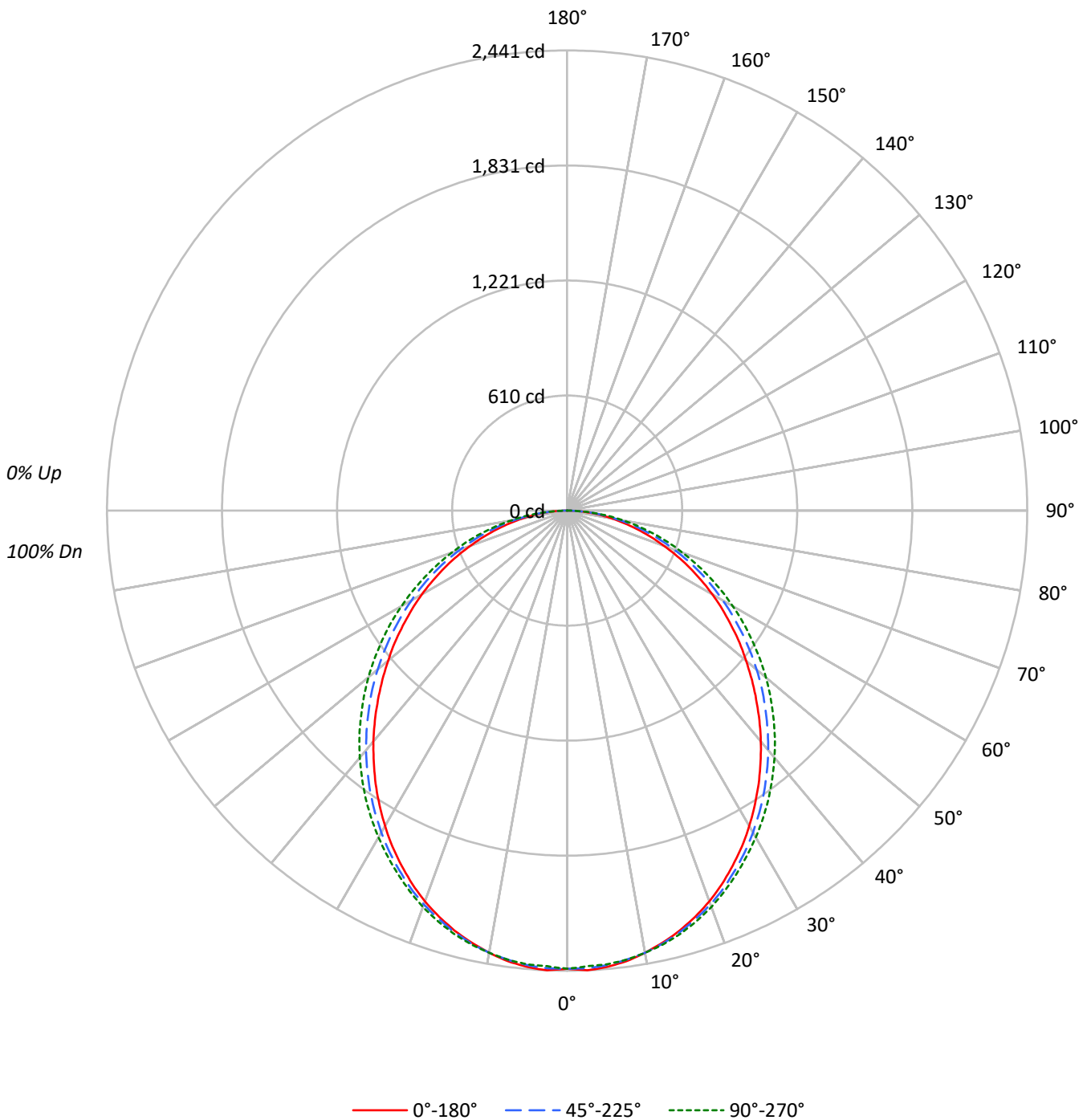
Lumens per Lamp: N/A  
Luminaire Lumens: 6510.0 lumens  
Efficiency: N/A  
Efficacy: 99.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.23 / 1.32  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 65.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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



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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	97	94	91		93	91	88		90	88	86	84
2	99	91	84	78	96	89	82	77	85	80	75		82	77	74		79	75	72	70
3	90	80	71	65	88	78	70	64	75	69	63		72	67	62		70	65	61	59
4	83	71	62	55	80	69	61	55	67	60	54		64	58	53		62	57	53	50
5	76	63	54	48	74	62	54	47	60	52	47		58	51	46		56	50	46	44
6	70	57	48	42	68	56	48	41	54	47	41		53	46	41		51	45	40	38
7	65	52	43	37	63	51	43	37	49	42	36		48	41	36		47	41	36	34
8	61	47	39	33	59	47	38	33	45	38	33		44	37	32		43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29		41	34	29		40	34	29	27
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°	3270	3270	3270
5°	3282	3270	3263
10°	3254	3254	3254
15°	3213	3224	3237
20°	3159	3184	3204
25°	3085	3127	3157
30°	3002	3063	3109
35°	2909	2991	3061
40°	2808	2915	3006
45°	2699	2830	2944
50°	2593	2747	2881
55°	2494	2656	2806
60°	2393	2566	2731
65°	2283	2478	2652
70°	2150	2378	2556
75°	2019	2271	2466
80°	1868	2135	2354
85°	1667	1982	2152



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	229.6	3.5
10°-20°	651.5	10.0
20°-30°	967.4	14.9
30°-40°	1135.1	17.4
40°-50°	1145.2	17.6
50°-60°	1011.7	15.5
60°-70°	768.7	11.8
70°-80°	459.9	7.1
80°-90°	140.9	2.2
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°	1848.4	28.4
0°-40°	2983.5	45.8
0°-60°	5140.5	79.0
0°-90°	6510.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6510.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2430	2430	2430	2430	2430	
5°	2430	2411	2421	2418	2416	230
15°	2306	2296	2314	2321	2324	650
25°	2078	2075	2106	2117	2126	957
35°	1771	1777	1821	1846	1863	1107
45°	1419	1434	1488	1531	1547	1095
55°	1063	1080	1132	1181	1196	952
65°	717	734	778	817	833	710
75°	388	407	437	462	474	412
85°	108	117	128	136	139	122
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2430.2	2430.2	2430.2	2430.2	2430.2
2.5°	2441.1	2422.3	2430.2	2427.0	2419.2
5°	2430.2	2411.4	2420.8	2417.6	2416.1
7.5°	2411.4	2394.2	2403.6	2403.6	2403.6
10°	2381.6	2367.5	2381.6	2381.6	2381.6
12.5°	2347.2	2334.7	2351.9	2353.4	2356.6
15°	2306.5	2295.5	2314.3	2320.6	2323.7
17.5°	2259.5	2250.1	2270.5	2279.9	2283.0
20°	2206.3	2196.9	2223.5	2229.7	2237.6
22.5°	2145.2	2140.5	2168.7	2174.9	2184.3
25°	2077.9	2074.7	2106.0	2117.0	2126.4
27.5°	2009.0	2007.4	2041.8	2055.9	2065.3
30°	1932.2	1933.8	1971.4	1988.6	2001.1
32.5°	1852.4	1857.1	1897.8	1918.1	1933.8
35°	1771.0	1777.2	1821.1	1846.1	1863.3
37.5°	1684.8	1694.2	1741.2	1771.0	1788.2
40°	1598.7	1609.7	1659.8	1691.1	1711.5
42.5°	1509.5	1523.6	1573.7	1614.4	1631.6
45°	1418.6	1434.3	1487.5	1531.4	1547.0
47.5°	1329.4	1349.7	1401.4	1445.3	1462.5
50°	1238.6	1257.4	1312.2	1357.6	1376.4
52.5°	1154.0	1171.2	1222.9	1269.9	1287.1
55°	1063.2	1080.4	1132.1	1180.6	1196.3
57.5°	977.1	992.7	1042.8	1091.4	1107.0
60°	889.4	905.1	953.6	997.4	1014.7
62.5°	803.3	818.9	867.5	908.2	923.8
65°	717.2	734.4	778.2	817.4	833.0
67.5°	632.6	649.8	690.5	728.1	740.6
70°	546.5	565.3	604.4	638.9	649.8
72.5°	466.6	485.4	519.9	549.6	563.7
75°	388.3	407.1	436.9	461.9	474.4
77.5°	313.2	332.0	355.4	375.8	386.8
80°	241.1	258.4	275.6	295.9	303.8
82.5°	172.2	186.3	200.4	216.1	222.3
85°	108.0	117.4	128.4	136.2	139.4
87.5°	47.0	53.2	54.8	56.4	54.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)