

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: P184187

Luminaire Tested: **24FR-80-HP-UNV-L850-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P184187  
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-80-HP-UNV-L850-CD1-U  
Description: METALUX 2X4 FR TROFFER LED HIGH EFFICIENCY FIXTURE  
  
Light Source: EATON LED 5000K  
Ballast/Driver: OSRAM ELECTRONIC DRIVER

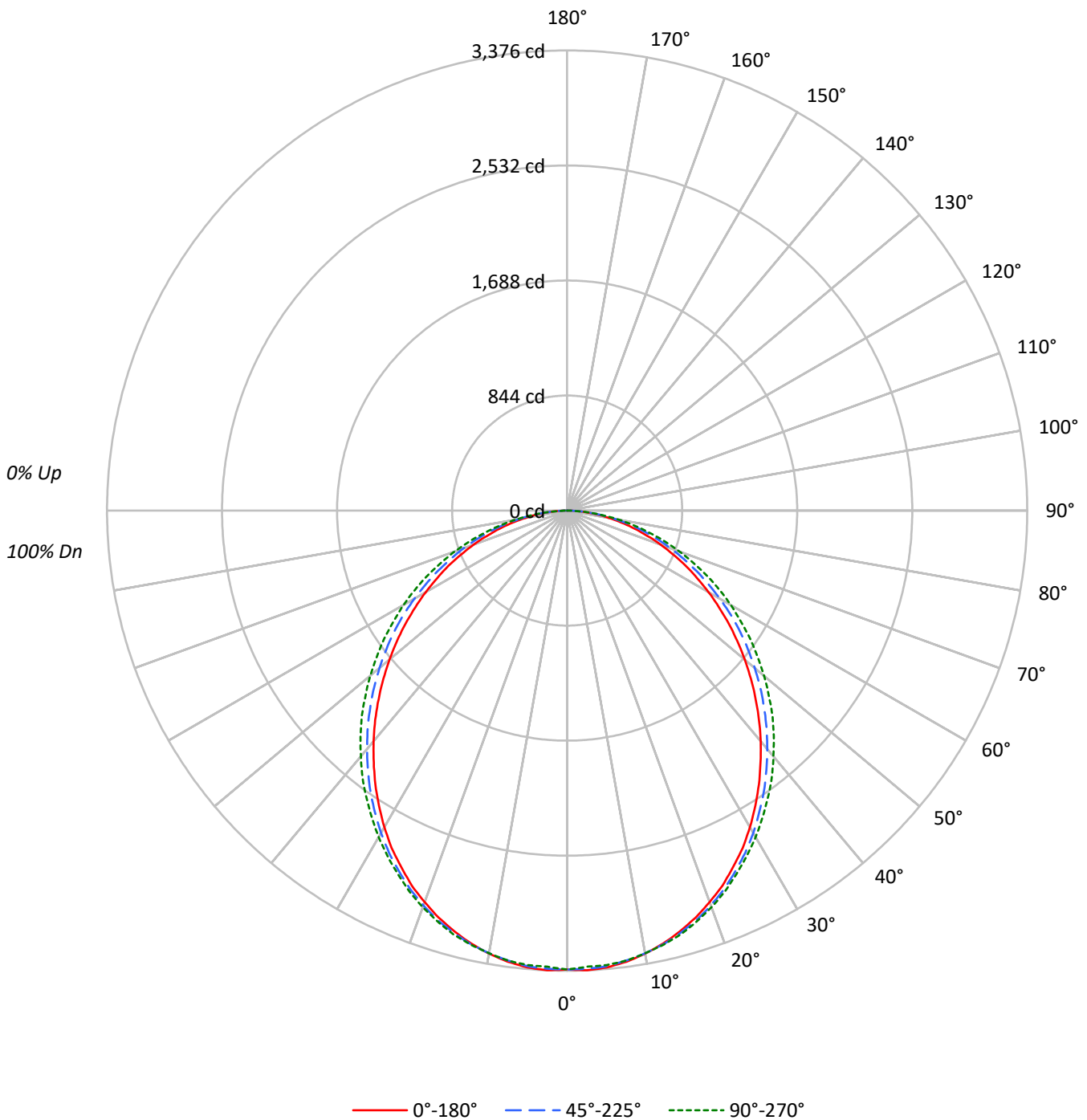
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8902.8 lumens  
Efficiency: N/A  
Efficacy: 124.2 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): 71.7  
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°	4530	4530	4530
5°	4544	4532	4520
10°	4509	4505	4505
15°	4452	4468	4484
20°	4376	4414	4435
25°	4279	4335	4365
30°	4167	4244	4298
35°	4029	4134	4220
40°	3880	4012	4135
45°	3723	3888	4054
50°	3561	3761	3949
55°	3398	3636	3847
60°	3226	3484	3734
65°	3059	3327	3604
70°	2866	3175	3448
75°	2656	3003	3244
80°	2429	2789	2969
85°	2195	2374	2374



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	318.0	3.6
10°-20°	903.2	10.1
20°-30°	1340.8	15.1
30°-40°	1569.1	17.6
40°-50°	1574.9	17.7
50°-60°	1379.5	15.5
60°-70°	1035.5	11.6
70°-80°	608.4	6.8
80°-90°	173.5	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°	2562.0	28.8
0°-40°	4131.1	46.4
0°-60°	7085.5	79.6
0°-90°	8902.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8902.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3367	3367	3367	3367	3367	
5°	3364	3341	3356	3350	3347	319
15°	3196	3184	3208	3216	3219	901
25°	2882	2882	2920	2929	2940	1328
35°	2453	2462	2517	2549	2569	1533
45°	1956	1980	2044	2099	2131	1509
55°	1448	1475	1550	1605	1640	1295
65°	961	987	1045	1100	1132	951
75°	511	540	578	607	624	543
85°	142	151	154	154	154	160
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3367.1	3367.1	3367.1	3367.1	3367.1
2.5°	3375.8	3355.5	3364.2	3361.3	3349.7
5°	3364.2	3341.0	3355.5	3349.7	3346.8
7.5°	3338.1	3314.9	3329.4	3329.4	3329.4
10°	3300.4	3283.0	3297.5	3297.5	3297.5
12.5°	3253.9	3239.4	3259.7	3262.6	3262.6
15°	3195.9	3184.3	3207.5	3216.2	3219.1
17.5°	3132.0	3123.3	3152.3	3161.0	3161.0
20°	3056.5	3050.7	3082.7	3091.4	3097.2
22.5°	2978.2	2969.5	3007.2	3013.0	3024.6
25°	2882.4	2882.4	2920.1	2928.8	2940.4
27.5°	2789.5	2786.6	2830.1	2844.7	2856.3
30°	2682.1	2682.1	2731.4	2751.8	2766.3
32.5°	2568.9	2577.6	2624.0	2650.2	2667.6
35°	2452.8	2461.5	2516.6	2548.6	2568.9
37.5°	2330.9	2345.4	2400.5	2441.2	2467.3
40°	2209.0	2229.3	2284.4	2330.9	2354.1
42.5°	2084.1	2101.6	2165.4	2217.7	2243.8
45°	1956.4	1979.6	2043.5	2098.7	2130.6
47.5°	1828.7	1857.7	1921.6	1982.5	2005.8
50°	1701.0	1727.1	1796.8	1857.7	1886.8
52.5°	1573.3	1599.4	1672.0	1730.0	1759.0
55°	1448.5	1474.6	1550.0	1605.2	1640.0
57.5°	1320.7	1349.8	1422.3	1480.4	1506.5
60°	1198.8	1224.9	1294.6	1352.7	1387.5
62.5°	1076.9	1105.9	1166.9	1227.8	1259.8
65°	960.8	986.9	1045.0	1100.1	1132.1
67.5°	841.8	873.7	923.1	978.2	1001.4
70°	728.6	763.4	807.0	853.4	876.6
72.5°	618.3	650.2	690.8	728.6	748.9
75°	510.9	539.9	577.6	606.7	624.1
77.5°	409.3	441.2	467.3	493.5	502.2
80°	313.5	339.6	359.9	377.4	383.2
82.5°	226.4	243.8	252.5	267.0	270.0
85°	142.2	150.9	153.8	153.8	153.8
87.5°	61.0	63.9	58.1	46.4	43.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)