

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: P184180

Luminaire Tested: **24FR-72-HP-UNV-L835-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P184180  
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-72-HP-UNV-L835-CD1-U  
Description: METALUX 2X4 FR TROFFER LED HIGH EFFICIENCY FIXTURE  
  
Light Source: EATON LED 3500K  
Ballast/Driver: OSRAM ELECTRONIC DRIVER

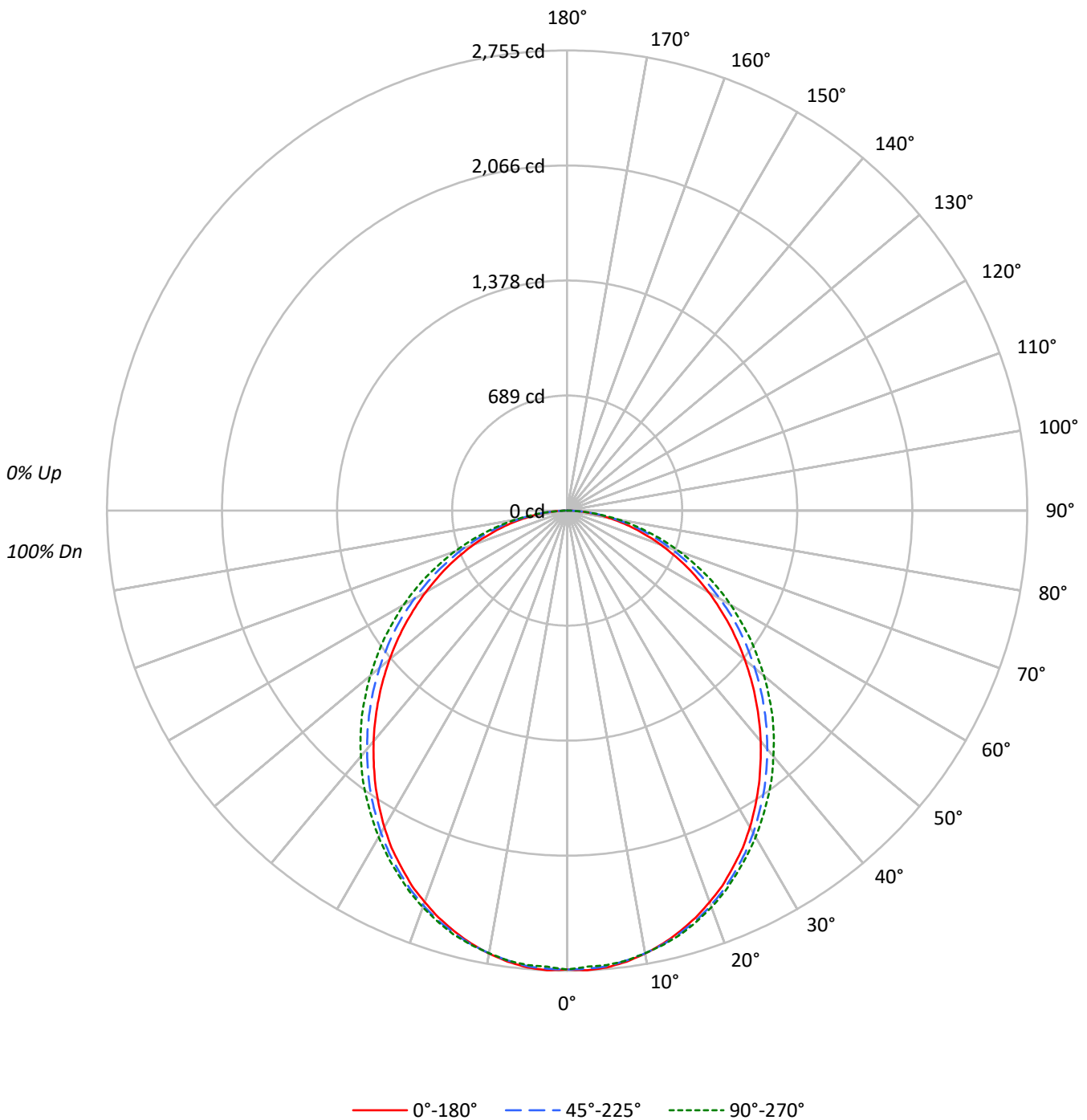
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7265.0 lumens  
Efficiency: N/A  
Efficacy: 114.8 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): 63.3  
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	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					100			
1	109	104	100	96	106	102	98	94	98	94	91	94	91	89	90	88	86	84					84			
2	99	91	84	78	96	89	83	77	85	80	76	82	78	74	79	75	72	70					70			
3	90	80	72	65	88	78	71	65	75	69	64	73	67	63	70	65	61	59					59			
4	83	71	62	56	81	70	61	55	67	60	54	65	59	54	63	57	53	51					51			
5	76	64	55	48	74	62	54	48	60	53	47	58	52	47	56	51	46	44					44			
6	71	57	48	42	69	56	48	42	55	47	41	53	46	41	51	45	41	39					39			
7	65	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34					34			
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28					28			
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25					25			

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

	0°	45°	90°
0°	3697	3697	3697
5°	3708	3698	3689
10°	3680	3676	3676
15°	3633	3646	3659
20°	3571	3602	3619
25°	3492	3538	3562
30°	3400	3463	3507
35°	3288	3373	3443
40°	3166	3274	3374
45°	3038	3173	3308
50°	2906	3069	3223
55°	2773	2967	3139
60°	2633	2843	3047
65°	2496	2715	2941
70°	2339	2591	2814
75°	2167	2451	2648
80°	1982	2276	2423
85°	1792	1937	1937



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	259.5	3.6
10°-20°	737.0	10.1
20°-30°	1094.1	15.1
30°-40°	1280.4	17.6
40°-50°	1285.2	17.7
50°-60°	1125.7	15.5
60°-70°	845.0	11.6
70°-80°	496.5	6.8
80°-90°	141.6	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°	2090.7	28.8
0°-40°	3371.1	46.4
0°-60°	5782.0	79.6
0°-90°	7265.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7265.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2748	2748	2748	2748	2748	
5°	2745	2726	2738	2734	2731	260
15°	2608	2598	2617	2624	2627	735
25°	2352	2352	2383	2390	2400	1084
35°	2002	2009	2054	2080	2096	1251
45°	1596	1616	1668	1713	1739	1232
55°	1182	1203	1265	1310	1338	1057
65°	784	805	853	898	924	776
75°	417	441	471	495	509	443
85°	116	123	126	126	126	130
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2747.7	2747.7	2747.7	2747.7	2747.7
2.5°	2754.8	2738.2	2745.3	2743.0	2733.5
5°	2745.3	2726.4	2738.2	2733.5	2731.1
7.5°	2724.0	2705.1	2716.9	2716.9	2716.9
10°	2693.2	2679.0	2690.8	2690.8	2690.8
12.5°	2655.3	2643.5	2660.0	2662.4	2662.4
15°	2607.9	2598.5	2617.4	2624.5	2626.9
17.5°	2555.8	2548.7	2572.4	2579.5	2579.5
20°	2494.2	2489.5	2515.6	2522.7	2527.4
22.5°	2430.3	2423.2	2454.0	2458.7	2468.2
25°	2352.1	2352.1	2382.9	2390.0	2399.5
27.5°	2276.3	2274.0	2309.5	2321.3	2330.8
30°	2188.7	2188.7	2228.9	2245.5	2257.4
32.5°	2096.3	2103.4	2141.3	2162.6	2176.8
35°	2001.6	2008.7	2053.7	2079.7	2096.3
37.5°	1902.1	1913.9	1958.9	1992.1	2013.4
40°	1802.6	1819.2	1864.2	1902.1	1921.0
42.5°	1700.7	1714.9	1767.0	1809.7	1831.0
45°	1596.5	1615.5	1667.6	1712.6	1738.6
47.5°	1492.3	1516.0	1568.1	1617.8	1636.8
50°	1388.1	1409.4	1466.2	1516.0	1539.7
52.5°	1283.8	1305.2	1364.4	1411.7	1435.4
55°	1182.0	1203.3	1264.9	1309.9	1338.3
57.5°	1077.8	1101.4	1160.7	1208.0	1229.4
60°	978.3	999.6	1056.4	1103.8	1132.2
62.5°	878.8	902.5	952.2	1002.0	1028.0
65°	784.0	805.4	852.7	897.7	923.8
67.5°	686.9	713.0	753.2	798.3	817.2
70°	594.5	623.0	658.5	696.4	715.3
72.5°	504.5	530.6	563.8	594.5	611.1
75°	416.9	440.6	471.4	495.1	509.3
77.5°	334.0	360.0	381.4	402.7	409.8
80°	255.8	277.1	293.7	307.9	312.7
82.5°	184.8	199.0	206.1	217.9	220.3
85°	116.1	123.2	125.5	125.5	125.5
87.5°	49.7	52.1	47.4	37.9	35.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)