

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: P184175

Luminaire Tested: **24FR-65-HP-UNV-L835-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P184175  
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-65-HP-UNV-L835-CD1-U  
Description: METALUX 2X4 FR TROFFER LED HIGH EFFICIENCY FIXTURE  
  
Light Source: EATON LED 3500K  
Ballast/Driver: OSRAM ELECTRONIC DRIVER

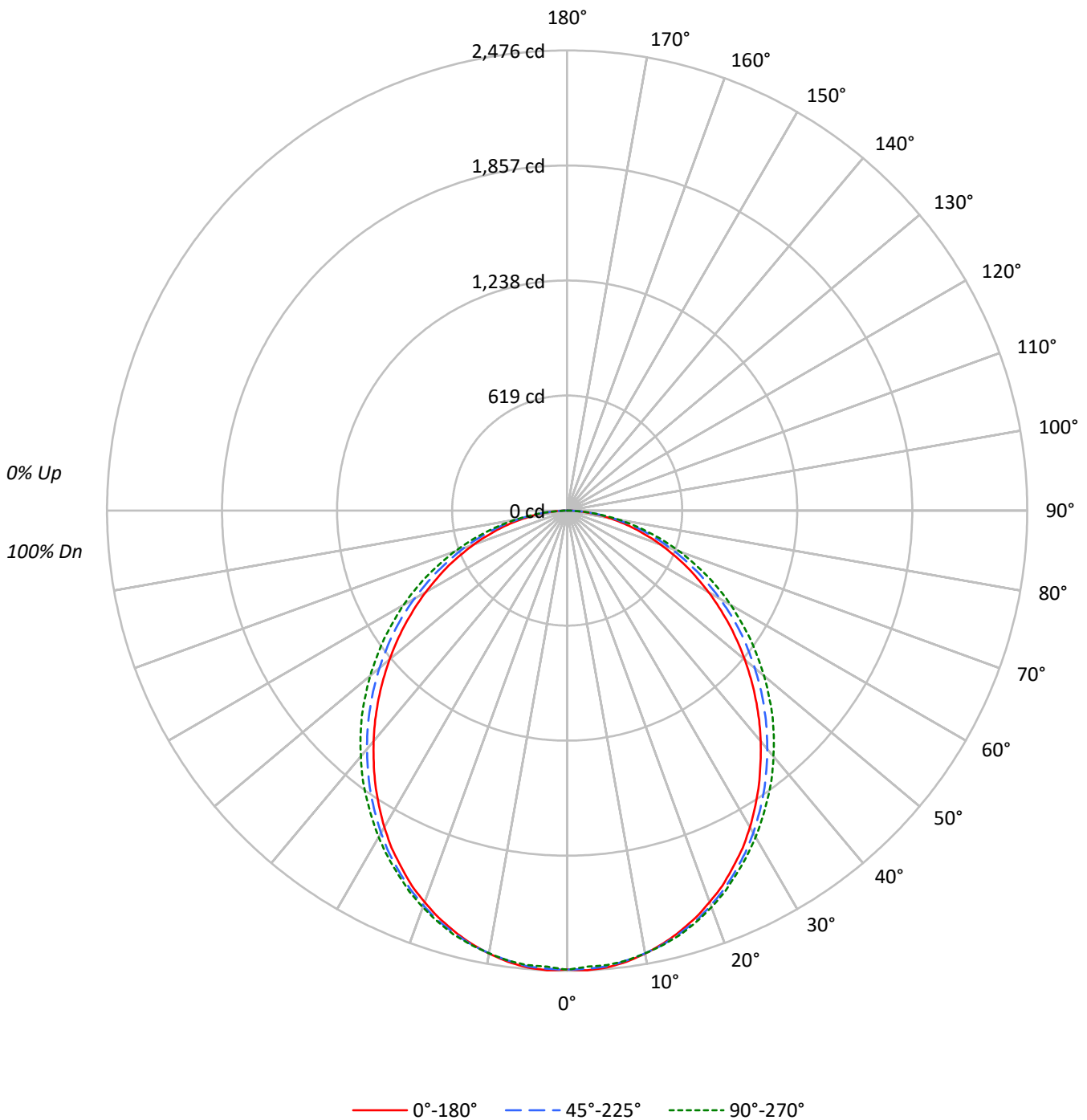
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6530.0 lumens  
Efficiency: N/A  
Efficacy: 121.4 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): 53.8  
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



TEST NUMBER: P184175  
CATALOG NUMBER: 24FR-65-HP-UNV-L835-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P184175

CATALOG NUMBER: 24FR-65-HP-UNV-L835-CD1-U

**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°	3323	3323	3323
5°	3333	3324	3316
10°	3307	3304	3304
15°	3265	3277	3289
20°	3210	3238	3253
25°	3139	3180	3202
30°	3056	3113	3152
35°	2955	3032	3095
40°	2846	2943	3033
45°	2731	2852	2974
50°	2611	2759	2897
55°	2492	2667	2822
60°	2366	2555	2739
65°	2244	2440	2643
70°	2102	2329	2530
75°	1948	2203	2379
80°	1781	2046	2177
85°	1610	1741	1741



TEST NUMBER: P184175

CATALOG NUMBER: 24FR-65-HP-UNV-L835-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	233.2	3.6
10°-20°	662.5	10.1
20°-30°	983.4	15.1
30°-40°	1150.9	17.6
40°-50°	1155.2	17.7
50°-60°	1011.8	15.5
60°-70°	759.5	11.6
70°-80°	446.3	6.8
80°-90°	127.2	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°	1879.1	28.8
0°-40°	3030.0	46.4
0°-60°	5197.0	79.6
0°-90°	6530.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6530.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2470	2470	2470	2470	2470	
5°	2468	2450	2461	2457	2455	234
15°	2344	2336	2353	2359	2361	661
25°	2114	2114	2142	2148	2157	974
35°	1799	1805	1846	1869	1884	1124
45°	1435	1452	1499	1539	1563	1107
55°	1062	1082	1137	1177	1203	950
65°	705	724	766	807	830	697
75°	375	396	424	445	458	398
85°	104	111	113	113	113	117
90°	0	0	0	0	0	



TEST NUMBER: P184175

CATALOG NUMBER: 24FR-65-HP-UNV-L835-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2469.7	2469.7	2469.7	2469.7	2469.7
2.5°	2476.1	2461.2	2467.6	2465.4	2456.9
5°	2467.6	2450.5	2461.2	2456.9	2454.8
7.5°	2448.4	2431.4	2442.0	2442.0	2442.0
10°	2420.7	2408.0	2418.6	2418.6	2418.6
12.5°	2386.7	2376.0	2390.9	2393.1	2393.1
15°	2344.1	2335.6	2352.6	2359.0	2361.1
17.5°	2297.3	2290.9	2312.2	2318.5	2318.5
20°	2241.9	2237.6	2261.1	2267.4	2271.7
22.5°	2184.4	2178.0	2205.7	2210.0	2218.5
25°	2114.2	2114.2	2141.8	2148.2	2156.7
27.5°	2046.0	2043.9	2075.8	2086.5	2095.0
30°	1967.2	1967.2	2003.4	2018.3	2029.0
32.5°	1884.2	1890.6	1924.7	1943.8	1956.6
35°	1799.1	1805.4	1845.9	1869.3	1884.2
37.5°	1709.6	1720.3	1760.7	1790.5	1809.7
40°	1620.2	1635.1	1675.6	1709.6	1726.7
42.5°	1528.7	1541.4	1588.3	1626.6	1645.8
45°	1435.0	1452.0	1498.9	1539.3	1562.7
47.5°	1341.3	1362.6	1409.4	1454.1	1471.2
50°	1247.6	1266.8	1317.9	1362.6	1383.9
52.5°	1153.9	1173.1	1226.3	1268.9	1290.2
55°	1062.4	1081.6	1136.9	1177.4	1202.9
57.5°	968.7	990.0	1043.2	1085.8	1105.0
60°	879.3	898.5	949.6	992.1	1017.7
62.5°	789.9	811.2	855.9	900.6	924.0
65°	704.7	723.9	766.5	806.9	830.3
67.5°	617.4	640.8	677.0	717.5	734.5
70°	534.4	559.9	591.9	625.9	643.0
72.5°	453.5	476.9	506.7	534.4	549.3
75°	374.7	396.0	423.7	445.0	457.7
77.5°	300.2	323.6	342.8	361.9	368.3
80°	229.9	249.1	264.0	276.8	281.0
82.5°	166.1	178.8	185.2	195.9	198.0
85°	104.3	110.7	112.8	112.8	112.8
87.5°	44.7	46.8	42.6	34.1	31.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)