

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: P184185

Luminaire Tested: **24FR-80-HP-UNV-L835-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P184185  
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-L835-CD1-U  
Description: METALUX 2X4 FR TROFFER LED HIGH EFFICIENCY FIXTURE  
  
Light Source: EATON LED 3500K  
Ballast/Driver: OSRAM ELECTRONIC DRIVER

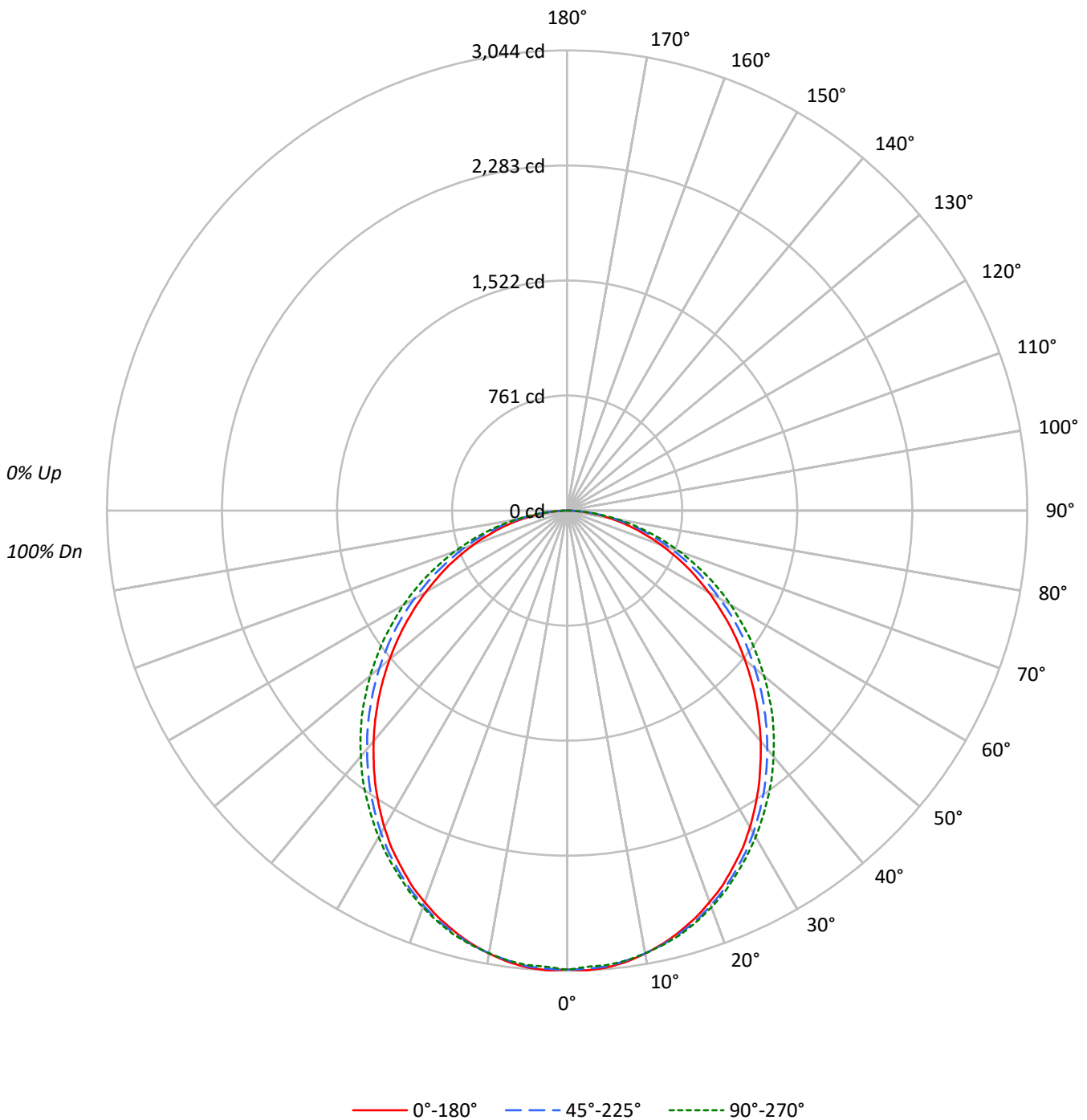
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8028.0 lumens  
Efficiency: N/A  
Efficacy: 112.0 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°	4085	4085	4085
5°	4097	4087	4076
10°	4066	4062	4062
15°	4014	4029	4043
20°	3946	3980	3999
25°	3859	3909	3936
30°	3757	3827	3875
35°	3633	3727	3805
40°	3499	3618	3729
45°	3357	3506	3656
50°	3211	3391	3561
55°	3064	3279	3469
60°	2909	3141	3367
65°	2758	3000	3250
70°	2585	2863	3110
75°	2395	2708	2926
80°	2190	2515	2677
85°	1981	2141	2141



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	286.7	3.6
10°-20°	814.4	10.1
20°-30°	1209.1	15.1
30°-40°	1414.9	17.6
40°-50°	1420.1	17.7
50°-60°	1243.9	15.5
60°-70°	933.7	11.6
70°-80°	548.7	6.8
80°-90°	156.4	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°	2310.2	28.8
0°-40°	3725.1	46.4
0°-60°	6389.2	79.6
0°-90°	8028.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8028.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3036	3036	3036	3036	3036	
5°	3034	3013	3026	3021	3018	288
15°	2882	2871	2892	2900	2903	812
25°	2599	2599	2633	2641	2652	1197
35°	2212	2220	2269	2298	2316	1382
45°	1764	1785	1843	1892	1921	1361
55°	1306	1330	1398	1448	1479	1168
65°	866	890	942	992	1021	857
75°	461	487	521	547	563	490
85°	128	136	139	139	139	144
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3036.3	3036.3	3036.3	3036.3	3036.3
2.5°	3044.1	3025.8	3033.6	3031.0	3020.6
5°	3033.6	3012.7	3025.8	3020.6	3017.9
7.5°	3010.1	2989.2	3002.2	3002.2	3002.2
10°	2976.1	2960.4	2973.4	2973.4	2973.4
12.5°	2934.2	2921.1	2939.4	2942.0	2942.0
15°	2881.8	2871.4	2892.3	2900.2	2902.8
17.5°	2824.2	2816.4	2842.6	2850.4	2850.4
20°	2756.2	2751.0	2779.8	2787.6	2792.8
22.5°	2685.5	2677.7	2711.7	2716.9	2727.4
25°	2599.1	2599.1	2633.2	2641.0	2651.5
27.5°	2515.4	2512.8	2552.0	2565.1	2575.6
30°	2418.5	2418.5	2463.0	2481.4	2494.4
32.5°	2316.5	2324.3	2366.2	2389.7	2405.5
35°	2211.8	2219.6	2269.3	2298.1	2316.5
37.5°	2101.8	2114.9	2164.6	2201.3	2224.8
40°	1991.9	2010.2	2059.9	2101.8	2122.8
42.5°	1879.3	1895.0	1952.6	1999.7	2023.3
45°	1764.2	1785.1	1842.7	1892.4	1921.2
47.5°	1649.0	1675.2	1732.8	1787.7	1808.7
50°	1533.8	1557.4	1620.2	1675.2	1701.4
52.5°	1418.7	1442.2	1507.7	1560.0	1586.2
55°	1306.1	1329.7	1397.7	1447.5	1478.9
57.5°	1190.9	1217.1	1282.6	1334.9	1358.5
60°	1081.0	1104.6	1167.4	1219.7	1251.2
62.5°	971.1	997.3	1052.2	1107.2	1136.0
65°	866.4	889.9	942.3	992.0	1020.8
67.5°	759.1	787.9	832.4	882.1	903.0
70°	657.0	688.4	727.7	769.5	790.5
72.5°	557.5	586.3	623.0	657.0	675.3
75°	460.7	486.8	520.9	547.1	562.8
77.5°	369.1	397.9	421.4	445.0	452.8
80°	282.7	306.2	324.6	340.3	345.5
82.5°	204.2	219.9	227.7	240.8	243.4
85°	128.3	136.1	138.7	138.7	138.7
87.5°	55.0	57.6	52.3	41.9	39.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)