

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: P184184

Luminaire Tested: **24FR-80-HP-UNV-L830-CD1-U**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P184184
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-L830-CD1-U
Description: METALUX 2X4 FR TROFFER LED HIGH EFFICIENCY FIXTURE

Light Source: EATON LED 3000K
Ballast/Driver: OSRAM ELECTRONIC DRIVER

Summary

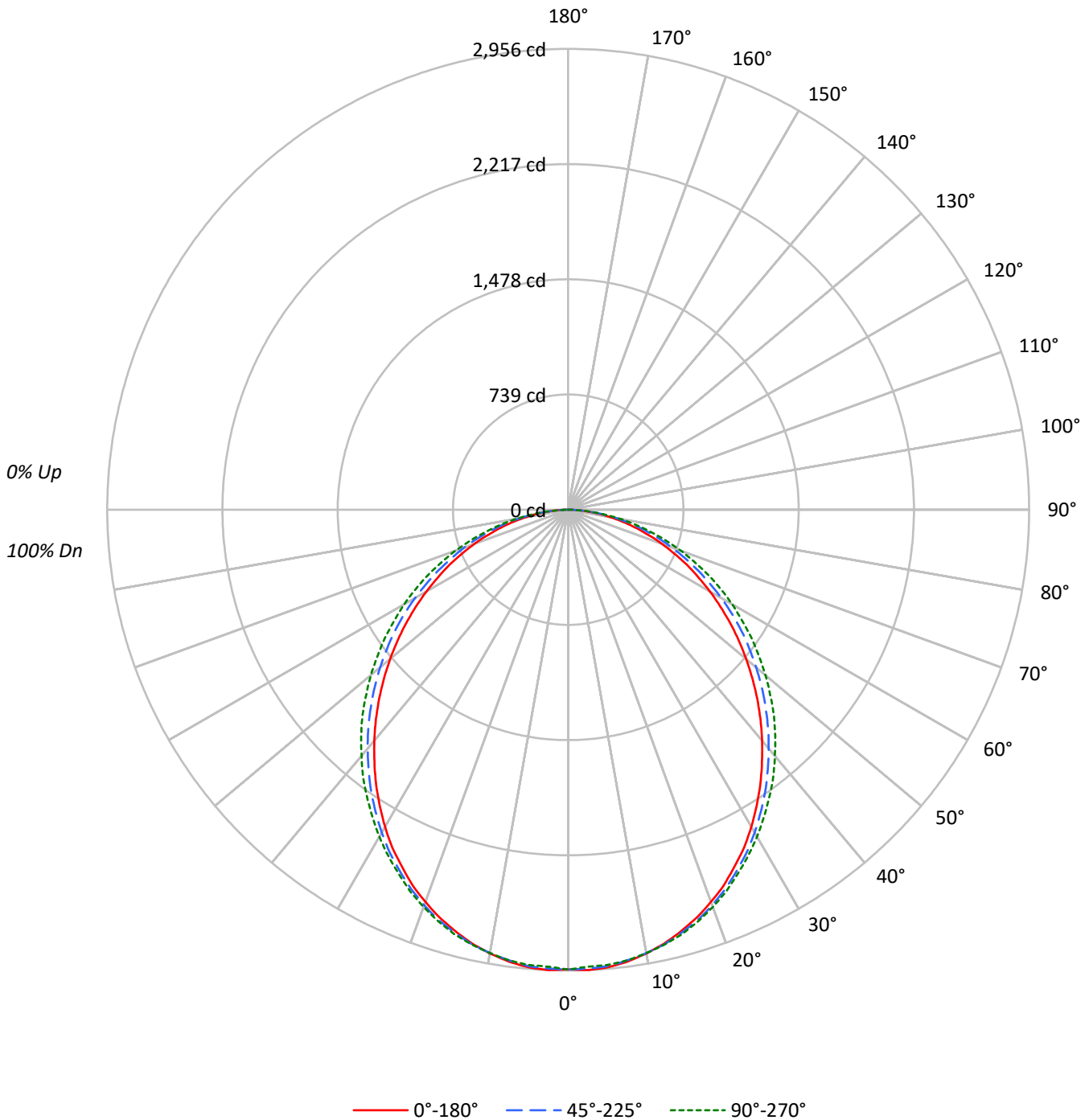
Lumens per Lamp: N/A
Luminaire Lumens: 7796.4 lumens
Efficiency: N/A
Efficacy: 108.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.22 / 1.32
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 71.7
Input Voltage (V): NR
Input Current (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	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°	3967	3967	3967
5°	3979	3969	3959
10°	3949	3945	3945
15°	3898	3913	3927
20°	3833	3865	3884
25°	3747	3796	3823
30°	3649	3716	3764
35°	3528	3620	3695
40°	3398	3514	3621
45°	3260	3405	3550
50°	3118	3294	3459
55°	2975	3184	3369
60°	2825	3051	3270
65°	2679	2913	3156
70°	2510	2780	3020
75°	2326	2630	2841
80°	2127	2442	2600
85°	1924	2079	2079



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	278.5	3.6
10°-20°	791.0	10.1
20°-30°	1174.2	15.1
30°-40°	1374.1	17.6
40°-50°	1379.2	17.7
50°-60°	1208.0	15.5
60°-70°	906.8	11.6
70°-80°	532.8	6.8
80°-90°	151.9	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°	2243.6	28.8
0°-40°	3617.7	46.4
0°-60°	6204.9	79.6
0°-90°	7796.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7796.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2949	2949	2949	2949	2949	
5°	2946	2926	2938	2933	2931	279
15°	2799	2788	2809	2816	2819	789
25°	2524	2524	2557	2565	2575	1163
35°	2148	2156	2204	2232	2250	1342
45°	1713	1734	1790	1838	1866	1322
55°	1268	1291	1357	1406	1436	1134
65°	841	864	915	963	991	833
75°	447	473	506	531	546	476
85°	125	132	135	135	135	140
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2948.7	2948.7	2948.7	2948.7	2948.7
2.5°	2956.3	2938.5	2946.1	2943.6	2933.4
5°	2946.1	2925.8	2938.5	2933.4	2930.9
7.5°	2923.3	2902.9	2915.6	2915.6	2915.6
10°	2890.2	2875.0	2887.7	2887.7	2887.7
12.5°	2849.5	2836.8	2854.6	2857.2	2857.2
15°	2798.7	2788.5	2808.9	2816.5	2819.0
17.5°	2742.8	2735.2	2760.6	2768.2	2768.2
20°	2676.7	2671.6	2699.6	2707.2	2712.3
22.5°	2608.1	2600.4	2633.5	2638.6	2648.7
25°	2524.2	2524.2	2557.2	2564.8	2575.0
27.5°	2442.8	2440.3	2478.4	2491.1	2501.3
30°	2348.8	2348.8	2392.0	2409.8	2422.5
32.5°	2249.6	2257.3	2297.9	2320.8	2336.1
35°	2148.0	2155.6	2203.9	2231.8	2249.6
37.5°	2041.2	2053.9	2102.2	2137.8	2160.7
40°	1934.4	1952.2	2000.5	2041.2	2061.5
42.5°	1825.1	1840.4	1896.3	1942.1	1964.9
45°	1713.3	1733.6	1789.5	1837.8	1865.8
47.5°	1601.4	1626.9	1682.8	1736.2	1756.5
50°	1489.6	1512.5	1573.5	1626.9	1652.3
52.5°	1377.7	1400.6	1464.2	1515.0	1540.4
55°	1268.4	1291.3	1357.4	1405.7	1436.2
57.5°	1156.6	1182.0	1245.6	1296.4	1319.3
60°	1049.8	1072.7	1133.7	1184.6	1215.1
62.5°	943.1	968.5	1021.9	1075.3	1103.2
65°	841.4	864.3	915.1	963.4	991.4
67.5°	737.2	765.1	808.3	856.6	877.0
70°	638.0	668.5	706.7	747.3	767.7
72.5°	541.4	569.4	605.0	638.0	655.8
75°	447.4	472.8	505.9	531.3	546.5
77.5°	358.4	386.4	409.3	432.1	439.8
80°	274.5	297.4	315.2	330.5	335.5
82.5°	198.3	213.5	221.2	233.9	236.4
85°	124.6	132.2	134.7	134.7	134.7
87.5°	53.4	55.9	50.8	40.7	38.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)