

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: P474296

Luminaire Tested: **24CZ2-110VHE-RDP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474296
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-RDP-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ RDP
INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7536.7 lumens
Efficiency: N/A
Efficacy: 97.9 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

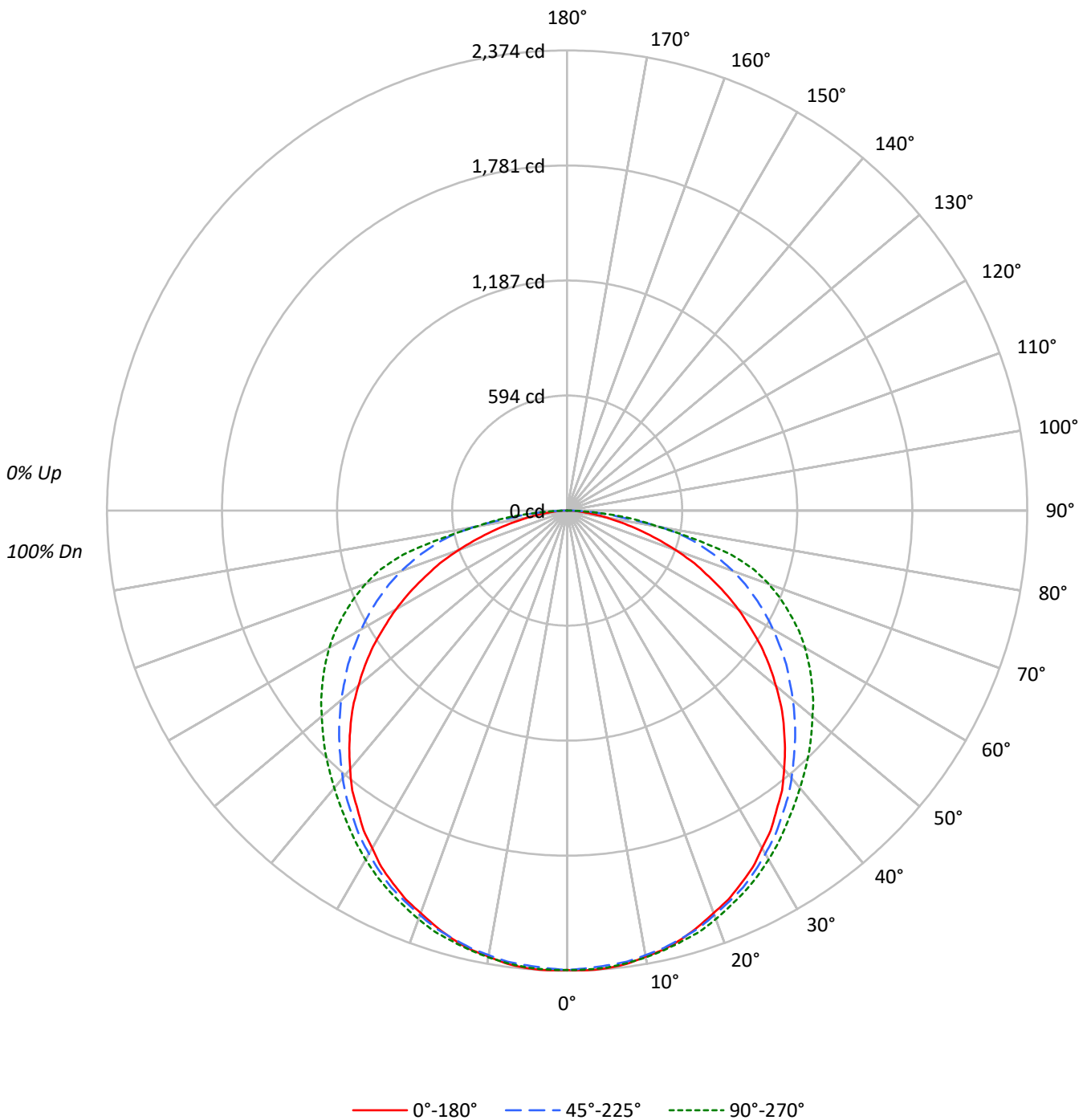
Input Watts (W): 77
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3189	3189	3189
5°	3201	3181	3196
10°	3192	3182	3197
15°	3187	3182	3203
20°	3164	3180	3212
25°	3152	3186	3219
30°	3125	3177	3229
35°	3095	3168	3242
40°	3060	3165	3283
45°	3009	3166	3357
50°	2942	3185	3459
55°	2867	3236	3613
60°	2747	3299	3813
65°	2571	3415	4046
70°	2338	3574	4353
75°	1981	3770	4548
80°	1565	3794	3677
85°	1155	2887	3234



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.8	3.0
10°-20°	647.1	8.6
20°-30°	989.5	13.1
30°-40°	1209.5	16.0
40°-50°	1289.2	17.1
50°-60°	1232.6	16.4
60°-70°	1044.2	13.9
70°-80°	701.8	9.3
80°-90°	198.0	2.6
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°	1861.4	24.7
0°-40°	3070.9	40.7
0°-60°	5592.8	74.2
0°-90°	7536.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7536.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2370	2370	2370	2370	2370	
5°	2370	2366	2355	2366	2366	225
15°	2288	2288	2284	2303	2299	645
25°	2123	2131	2146	2164	2168	979
35°	1884	1899	1929	1966	1974	1180
45°	1581	1608	1664	1735	1764	1220
55°	1222	1267	1379	1488	1540	1089
65°	808	890	1073	1215	1271	802
75°	381	520	725	849	875	408
85°	75	153	187	202	210	93
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2370.2	2370.2	2370.2	2370.2	2370.2
2.5°	2374.0	2374.0	2362.7	2370.2	2370.2
5°	2370.2	2366.5	2355.3	2366.5	2366.5
7.5°	2359.0	2355.3	2347.8	2359.0	2355.3
10°	2336.6	2336.6	2329.1	2340.3	2340.3
12.5°	2317.8	2314.1	2310.4	2325.3	2321.6
15°	2287.9	2287.9	2284.2	2302.9	2299.1
17.5°	2250.5	2254.3	2258.0	2273.0	2276.7
20°	2209.4	2216.9	2220.6	2243.0	2243.0
22.5°	2172.0	2175.7	2183.2	2205.6	2205.6
25°	2123.4	2130.8	2145.8	2164.5	2168.2
27.5°	2074.7	2078.5	2097.2	2123.4	2127.1
30°	2011.1	2022.4	2044.8	2074.7	2078.5
32.5°	1955.0	1966.3	1992.4	2022.4	2029.8
35°	1884.0	1898.9	1928.9	1966.3	1973.7
37.5°	1820.4	1831.6	1869.0	1910.2	1921.4
40°	1742.2	1764.3	1801.7	1850.3	1869.0
42.5°	1663.7	1686.1	1731.0	1794.2	1816.7
45°	1581.4	1607.6	1663.7	1734.7	1764.3
47.5°	1499.1	1529.0	1592.6	1674.9	1708.6
50°	1405.6	1443.0	1521.5	1615.1	1652.5
52.5°	1315.8	1360.7	1446.7	1551.5	1600.1
55°	1222.3	1267.2	1379.4	1487.9	1540.2
57.5°	1117.6	1177.4	1300.9	1424.3	1480.4
60°	1020.7	1076.5	1226.1	1360.7	1416.8
62.5°	916.0	990.8	1151.3	1293.4	1349.5
65°	807.5	889.8	1072.7	1214.8	1270.9
67.5°	710.3	800.0	994.5	1136.3	1192.4
70°	594.3	706.5	908.5	1050.3	1106.4
72.5°	485.9	609.3	818.7	957.1	1009.5
75°	381.1	519.5	725.2	848.7	874.9
77.5°	284.3	429.8	628.0	680.4	661.7
80°	202.0	344.1	489.6	463.4	474.6
82.5°	130.9	261.8	303.0	344.1	355.0
85°	74.8	153.4	187.0	202.0	209.5
87.5°	33.7	56.1	74.8	74.8	71.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)