

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: P473965

Luminaire Tested: **24CZ2-50-S-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473965
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-50-S-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

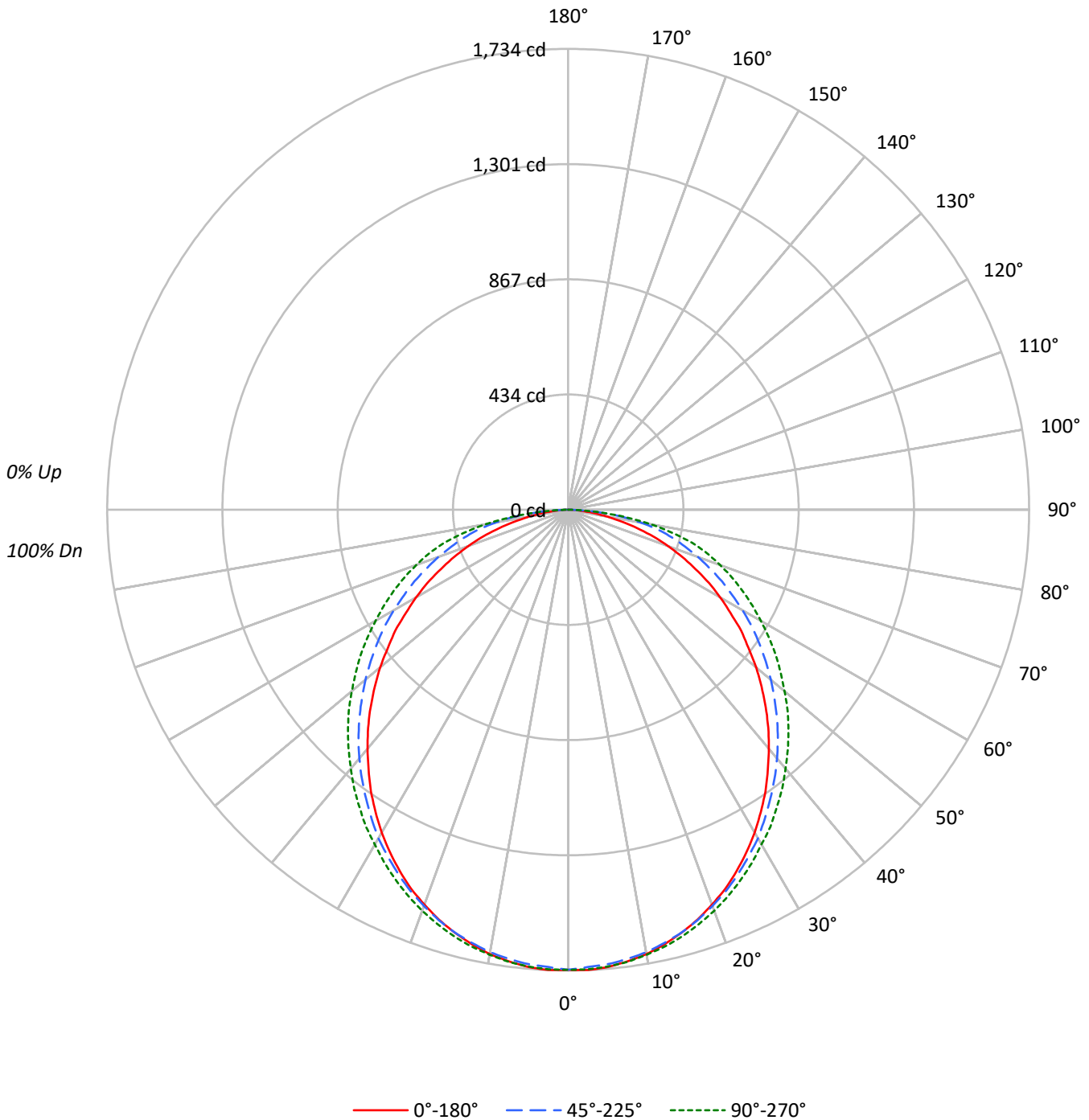
Lumens per Lamp: N/A
Luminaire Lumens: 4959.9 lumens
Efficiency: N/A
Efficacy: 124.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 39.8
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	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2329	2329	2329
5°	2333	2318	2331
10°	2320	2310	2323
15°	2296	2295	2314
20°	2264	2271	2299
25°	2227	2246	2281
30°	2180	2218	2259
35°	2125	2178	2247
40°	2062	2146	2234
45°	2000	2113	2229
50°	1932	2084	2224
55°	1863	2058	2236
60°	1778	2039	2252
65°	1683	2031	2306
70°	1570	2042	2388
75°	1398	2101	2516
80°	1143	2146	2455
85°	804	1874	1911



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	163.7	3.3
10°-20°	466.2	9.4
20°-30°	698.8	14.1
30°-40°	832.2	16.8
40°-50°	858.1	17.3
50°-60°	783.0	15.8
60°-70°	626.1	12.6
70°-80°	409.0	8.2
80°-90°	122.8	2.5
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°	1328.6	26.8
0°-40°	2160.8	43.6
0°-60°	3802.0	76.7
0°-90°	4959.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4959.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1731	1731	1731	1731	1731	
5°	1727	1724	1717	1727	1726	164
15°	1648	1649	1647	1661	1661	465
25°	1500	1502	1513	1535	1536	691
35°	1294	1303	1326	1360	1368	808
45°	1051	1070	1110	1157	1172	810
55°	794	817	877	935	953	707
65°	529	565	638	701	724	524
75°	269	314	404	469	484	286
85°	52	94	121	124	124	66
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1731.2	1731.2	1731.2	1731.2	1731.2
2.5°	1733.7	1731.2	1722.3	1732.9	1731.2
5°	1727.2	1723.9	1716.6	1727.2	1725.5
7.5°	1714.1	1712.5	1705.2	1717.4	1715.8
10°	1697.8	1696.2	1690.5	1702.7	1700.3
12.5°	1675.0	1674.2	1670.1	1684.8	1683.2
15°	1648.1	1649.0	1647.3	1661.2	1661.2
17.5°	1617.2	1616.4	1619.6	1636.7	1635.1
20°	1581.3	1582.1	1586.2	1605.8	1605.8
22.5°	1543.9	1543.0	1552.0	1571.6	1573.2
25°	1499.9	1502.3	1512.9	1534.9	1536.5
27.5°	1452.6	1456.7	1469.7	1495.0	1497.4
30°	1402.9	1407.8	1427.4	1451.0	1454.2
32.5°	1348.3	1358.9	1376.8	1407.0	1415.1
35°	1293.7	1302.7	1326.3	1359.7	1367.9
37.5°	1233.5	1248.1	1275.0	1311.7	1322.3
40°	1174.0	1188.6	1222.0	1260.3	1271.7
42.5°	1113.7	1129.2	1167.5	1210.6	1222.9
45°	1051.0	1069.7	1110.4	1156.9	1171.5
47.5°	986.6	1008.6	1052.6	1103.1	1119.4
50°	923.1	945.1	995.6	1047.7	1062.4
52.5°	854.6	882.3	936.1	992.3	1007.0
55°	794.3	817.1	877.4	935.3	953.2
57.5°	723.5	754.4	818.8	877.4	894.5
60°	660.7	689.2	757.7	817.1	836.7
62.5°	597.2	626.5	694.9	762.6	780.5
65°	528.7	564.6	637.9	700.6	724.3
67.5°	463.6	501.0	576.0	642.8	667.2
70°	399.2	437.5	519.0	587.4	607.0
72.5°	335.7	375.6	460.3	527.1	549.9
75°	268.9	313.7	404.1	469.3	483.9
77.5°	206.1	255.8	347.1	391.1	401.6
80°	147.5	202.0	277.0	308.8	316.9
82.5°	96.9	149.9	206.9	224.0	221.6
85°	52.1	93.7	121.4	123.8	123.8
87.5°	20.4	37.5	38.3	29.3	27.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)