

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: P473988

Luminaire Tested: **24CZ2-70VHE-S-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473988
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70VHE-S-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6884.3 lumens
Efficiency: N/A
Efficacy: 144.0 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

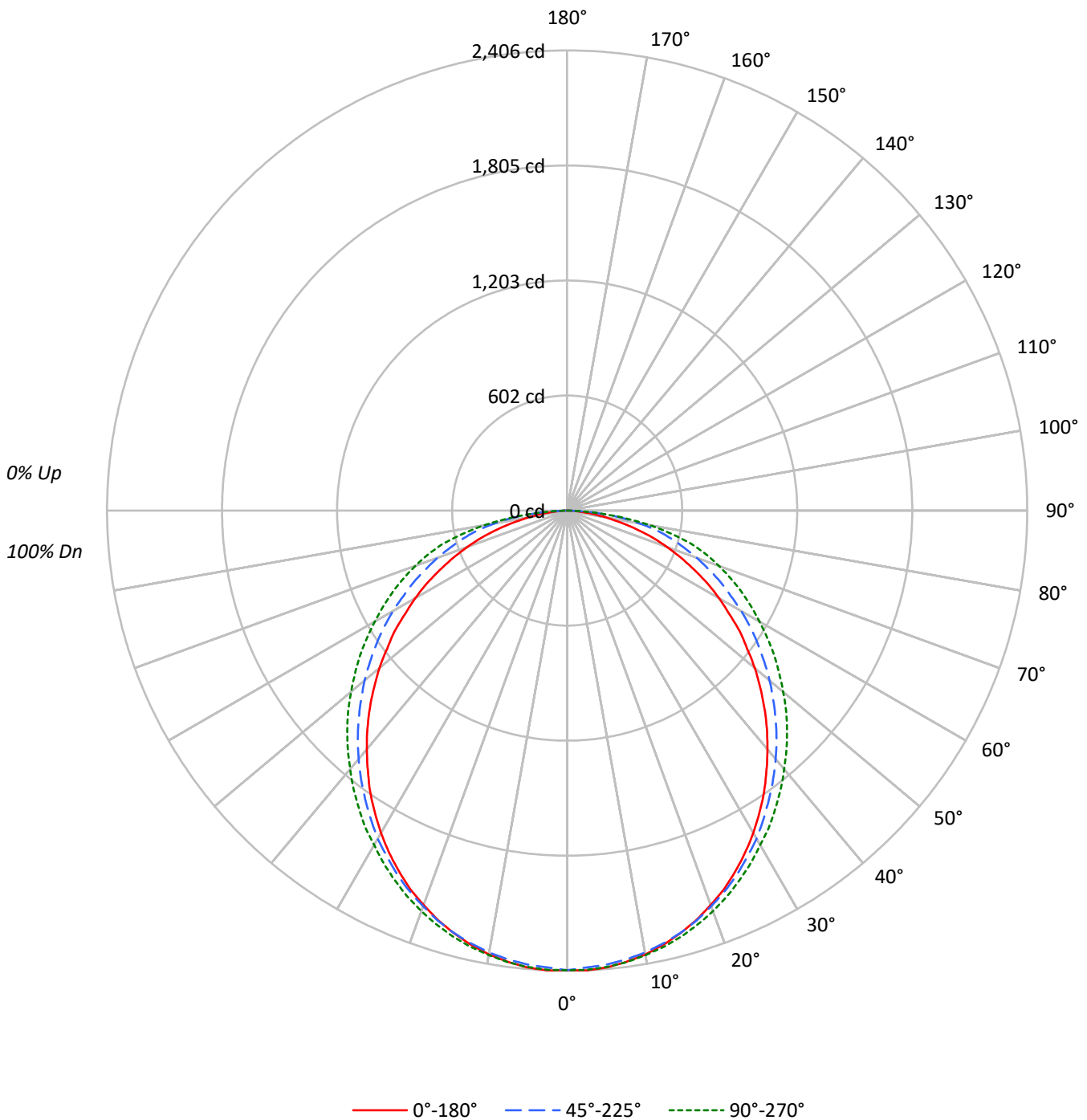
Input Watts (W): 47.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3233	3233	3233
5°	3238	3218	3235
10°	3220	3206	3224
15°	3187	3185	3212
20°	3143	3152	3191
25°	3091	3117	3166
30°	3025	3078	3136
35°	2950	3024	3119
40°	2862	2979	3100
45°	2776	2933	3094
50°	2682	2892	3086
55°	2586	2857	3103
60°	2468	2830	3125
65°	2337	2819	3201
70°	2180	2834	3314
75°	1940	2916	3492
80°	1586	2979	3409
85°	1118	2601	2654



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	227.2	3.3
10°-20°	647.0	9.4
20°-30°	969.9	14.1
30°-40°	1155.1	16.8
40°-50°	1191.1	17.3
50°-60°	1086.8	15.8
60°-70°	869.1	12.6
70°-80°	567.7	8.2
80°-90°	170.5	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°	1844.1	26.8
0°-40°	2999.2	43.6
0°-60°	5277.1	76.7
0°-90°	6884.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6884.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2403	2403	2403	2403	2403	
5°	2397	2393	2383	2397	2395	227
15°	2288	2289	2286	2306	2306	645
25°	2082	2085	2100	2130	2133	958
35°	1796	1808	1841	1887	1899	1122
45°	1459	1485	1541	1606	1626	1125
55°	1102	1134	1218	1298	1323	982
65°	734	784	885	972	1005	728
75°	373	435	561	651	672	397
85°	72	130	168	172	172	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2402.9	2402.9	2402.9	2402.9	2402.9
2.5°	2406.3	2402.9	2390.5	2405.2	2402.9
5°	2397.3	2392.7	2382.6	2397.3	2395.0
7.5°	2379.2	2376.9	2366.7	2383.7	2381.4
10°	2356.5	2354.3	2346.4	2363.3	2359.9
12.5°	2324.9	2323.8	2318.1	2338.5	2336.2
15°	2287.6	2288.7	2286.4	2305.7	2305.7
17.5°	2244.6	2243.5	2248.0	2271.7	2269.5
20°	2194.8	2196.0	2201.6	2228.8	2228.8
22.5°	2142.8	2141.7	2154.1	2181.3	2183.5
25°	2081.8	2085.2	2099.9	2130.4	2132.7
27.5°	2016.2	2021.8	2039.9	2075.0	2078.4
30°	1947.2	1954.0	1981.1	2013.9	2018.4
32.5°	1871.4	1886.1	1911.0	1952.9	1964.2
35°	1795.7	1808.1	1840.9	1887.3	1898.6
37.5°	1712.0	1732.4	1769.7	1820.6	1835.3
40°	1629.5	1649.8	1696.2	1749.3	1765.1
42.5°	1545.8	1567.3	1620.4	1680.3	1697.3
45°	1458.7	1484.7	1541.3	1605.7	1626.1
47.5°	1369.4	1399.9	1461.0	1531.1	1553.7
50°	1281.2	1311.7	1381.8	1454.2	1474.5
52.5°	1186.2	1224.6	1299.3	1377.3	1397.6
55°	1102.5	1134.2	1217.9	1298.1	1323.0
57.5°	1004.1	1047.1	1136.4	1217.9	1241.6
60°	917.1	956.6	1051.6	1134.2	1161.3
62.5°	828.9	869.6	964.6	1058.4	1083.3
65°	733.9	783.6	885.4	972.5	1005.3
67.5°	643.4	695.4	799.5	892.2	926.1
70°	554.1	607.2	720.3	815.3	842.4
72.5°	465.9	521.3	638.9	731.6	763.3
75°	373.2	435.4	560.9	651.3	671.7
77.5°	286.1	355.1	481.7	542.8	557.5
80°	204.7	280.4	384.5	428.6	439.9
82.5°	134.6	208.1	287.2	311.0	307.6
85°	72.4	130.0	168.5	171.9	171.9
87.5°	28.3	52.0	53.1	40.7	38.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)