

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: P473788

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473788
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70VHE-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

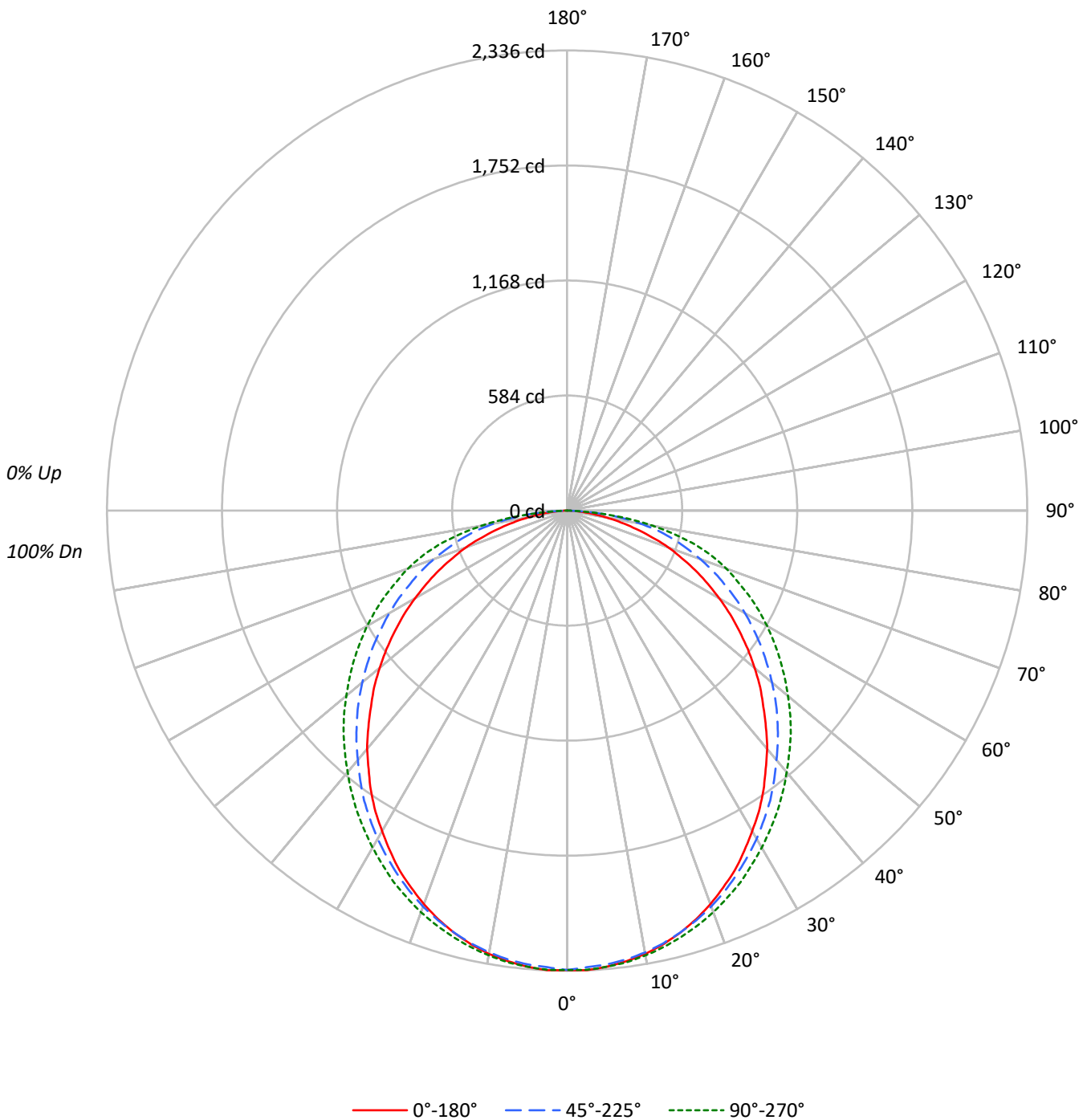
Lumens per Lamp: N/A
Luminaire Lumens: 6749.1 lumens
Efficiency: N/A
Efficacy: 141.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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	89	82	76	95	88	81	75	84	78	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52	63	57	51	61	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44	55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3138	3138	3138
5°	3140	3123	3140
10°	3122	3112	3133
15°	3091	3089	3120
20°	3044	3063	3107
25°	2991	3025	3092
30°	2919	2990	3070
35°	2853	2951	3057
40°	2775	2903	3045
45°	2680	2873	3054
50°	2600	2842	3063
55°	2504	2821	3097
60°	2400	2808	3154
65°	2287	2798	3235
70°	2153	2827	3384
75°	1893	2885	3520
80°	1580	2906	3396
85°	1129	2492	2526



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.5	3.3
10°-20°	628.0	9.3
20°-30°	942.1	14.0
30°-40°	1124.8	16.7
40°-50°	1165.0	17.3
50°-60°	1072.5	15.9
60°-70°	865.2	12.8
70°-80°	565.3	8.4
80°-90°	165.7	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°	1790.5	26.5
0°-40°	2915.3	43.2
0°-60°	5152.9	76.3
0°-90°	6749.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6749.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2332	2332	2332	2332	2332	
5°	2325	2322	2313	2326	2325	221
15°	2219	2219	2218	2240	2240	625
25°	2015	2019	2038	2075	2083	926
35°	1737	1752	1797	1846	1861	1085
45°	1409	1444	1510	1578	1605	1089
55°	1067	1113	1203	1291	1320	955
65°	718	768	879	979	1016	710
75°	364	433	555	651	677	389
85°	73	126	161	171	164	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2332.2	2332.2	2332.2	2332.2	2332.2
2.5°	2335.5	2332.2	2320.2	2334.4	2333.3
5°	2324.6	2322.4	2312.6	2325.7	2324.6
7.5°	2307.2	2306.1	2298.4	2312.6	2312.6
10°	2285.4	2283.2	2277.7	2294.1	2293.0
12.5°	2254.8	2253.7	2250.5	2270.1	2269.0
15°	2218.8	2218.8	2217.8	2239.6	2239.6
17.5°	2175.2	2176.3	2180.7	2205.8	2206.8
20°	2126.2	2130.5	2139.2	2167.6	2169.8
22.5°	2070.6	2079.3	2091.3	2122.9	2126.2
25°	2014.9	2019.3	2037.8	2074.9	2082.6
27.5°	1947.3	1958.3	1982.2	2020.4	2028.0
30°	1878.7	1893.9	1924.5	1963.7	1975.7
32.5°	1811.1	1824.1	1860.1	1904.8	1919.0
35°	1736.9	1752.2	1796.9	1845.9	1861.2
37.5°	1655.1	1679.1	1726.0	1782.7	1799.1
40°	1579.9	1601.7	1653.0	1716.2	1733.6
42.5°	1493.8	1521.0	1583.2	1647.5	1669.3
45°	1408.7	1443.6	1510.1	1577.7	1605.0
47.5°	1329.1	1357.5	1436.0	1512.3	1536.3
50°	1241.9	1274.6	1357.5	1438.2	1463.2
52.5°	1155.8	1195.0	1279.0	1364.0	1391.3
55°	1067.4	1113.2	1202.6	1291.0	1320.4
57.5°	982.4	1028.2	1120.9	1214.6	1245.2
60°	891.9	941.0	1043.5	1134.0	1172.1
62.5°	804.7	853.7	961.7	1059.8	1095.8
65°	718.5	767.6	878.8	979.1	1016.2
67.5°	629.1	682.6	801.4	898.4	934.4
70°	547.4	598.6	718.5	822.1	860.3
72.5°	453.6	514.6	636.8	739.3	775.2
75°	364.2	432.9	555.0	650.9	677.1
77.5°	281.3	350.0	472.1	544.1	560.4
80°	203.9	273.7	375.1	425.2	438.3
82.5°	131.9	203.9	271.5	305.3	309.7
85°	73.1	126.5	161.4	171.2	163.6
87.5°	26.2	48.0	46.9	38.2	30.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)