

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: P473790

Luminaire Tested: **24CZ2-80VHE-UNV-L830-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P473790  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-80VHE-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**

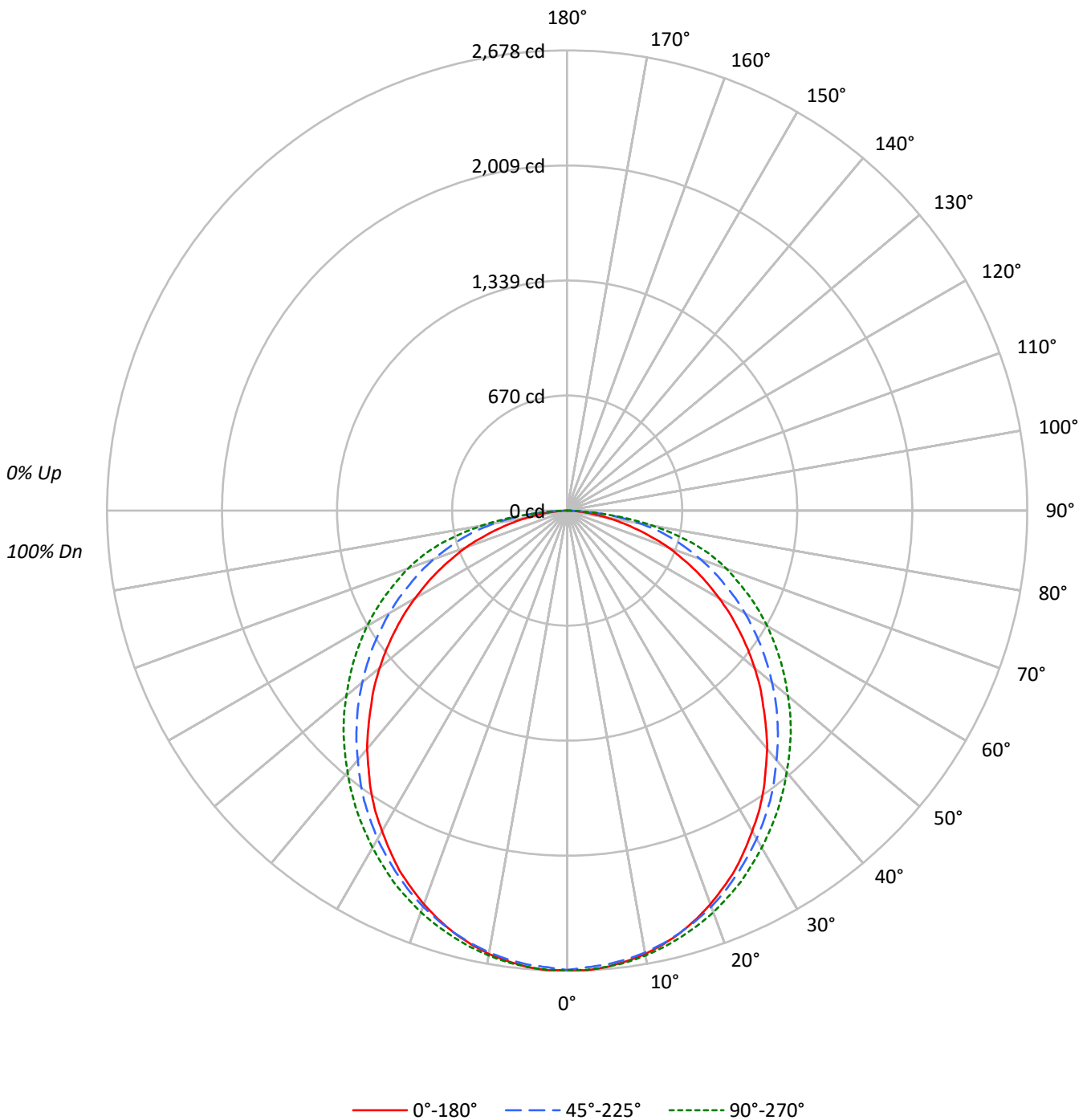
Lumens per Lamp: N/A  
Luminaire Lumens: 7738.2 lumens  
Efficiency: N/A  
Efficacy: 137.7 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 56.2  
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°	3598	3598	3598
5°	3600	3581	3600
10°	3580	3568	3592
15°	3544	3542	3577
20°	3491	3512	3562
25°	3430	3469	3545
30°	3347	3428	3519
35°	3271	3384	3505
40°	3182	3329	3491
45°	3073	3295	3502
50°	2981	3258	3512
55°	2871	3235	3551
60°	2752	3219	3616
65°	2623	3208	3709
70°	2469	3241	3880
75°	2170	3308	4036
80°	1812	3332	3894
85°	1294	2856	2895



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	252.8	3.3
10°-20°	720.0	9.3
20°-30°	1080.2	14.0
30°-40°	1289.6	16.7
40°-50°	1335.8	17.3
50°-60°	1229.7	15.9
60°-70°	992.0	12.8
70°-80°	648.1	8.4
80°-90°	190.0	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°	2053.0	26.5
0°-40°	3342.6	43.2
0°-60°	5908.1	76.3
0°-90°	7738.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7738.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2674	2674	2674	2674	2674	
5°	2665	2663	2652	2666	2665	253
15°	2544	2544	2543	2568	2568	717
25°	2310	2315	2336	2379	2388	1062
35°	1992	2009	2060	2116	2134	1244
45°	1615	1655	1731	1809	1840	1249
55°	1224	1276	1379	1480	1514	1095
65°	824	880	1008	1123	1165	815
75°	418	496	636	746	776	446
85°	84	145	185	196	188	104
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2674.0	2674.0	2674.0	2674.0	2674.0
2.5°	2677.8	2674.0	2660.3	2676.5	2675.3
5°	2665.3	2662.8	2651.5	2666.5	2665.3
7.5°	2645.3	2644.0	2635.3	2651.5	2651.5
10°	2620.3	2617.8	2611.5	2630.3	2629.0
12.5°	2585.3	2584.0	2580.3	2602.8	2601.5
15°	2544.0	2544.0	2542.8	2567.8	2567.8
17.5°	2494.0	2495.3	2500.3	2529.0	2530.3
20°	2437.8	2442.8	2452.8	2485.3	2487.8
22.5°	2374.0	2384.0	2397.8	2434.0	2437.8
25°	2310.2	2315.2	2336.5	2379.0	2387.8
27.5°	2232.7	2245.2	2272.7	2316.5	2325.3
30°	2154.0	2171.5	2206.5	2251.5	2265.2
32.5°	2076.5	2091.5	2132.7	2184.0	2200.2
35°	1991.5	2009.0	2060.2	2116.5	2134.0
37.5°	1897.7	1925.2	1979.0	2044.0	2062.7
40°	1811.4	1836.4	1895.2	1967.7	1987.7
42.5°	1712.7	1743.9	1815.2	1889.0	1914.0
45°	1615.2	1655.2	1731.4	1808.9	1840.2
47.5°	1523.9	1556.4	1646.4	1733.9	1761.4
50°	1423.9	1461.4	1556.4	1648.9	1677.7
52.5°	1325.1	1370.1	1466.4	1563.9	1595.2
55°	1223.9	1276.4	1378.9	1480.2	1513.9
57.5°	1126.4	1178.9	1285.1	1392.7	1427.7
60°	1022.6	1078.9	1196.4	1300.1	1343.9
62.5°	922.6	978.9	1102.6	1215.1	1256.4
65°	823.8	880.1	1007.6	1122.6	1165.1
67.5°	721.3	782.6	918.8	1030.1	1071.4
70°	627.6	686.3	823.8	942.6	986.4
72.5°	520.1	590.1	730.1	847.6	888.8
75°	417.5	496.3	636.3	746.3	776.3
77.5°	322.5	401.3	541.3	623.8	642.6
80°	233.8	313.8	430.0	487.6	502.6
82.5°	151.3	233.8	311.3	350.0	355.0
85°	83.8	145.0	185.0	196.3	187.5
87.5°	30.0	55.0	53.8	43.8	35.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)