

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: P473940

Luminaire Tested: **24CZ2-80VHE-UNV-L850-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P473940  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-80VHE-UNV-L850-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

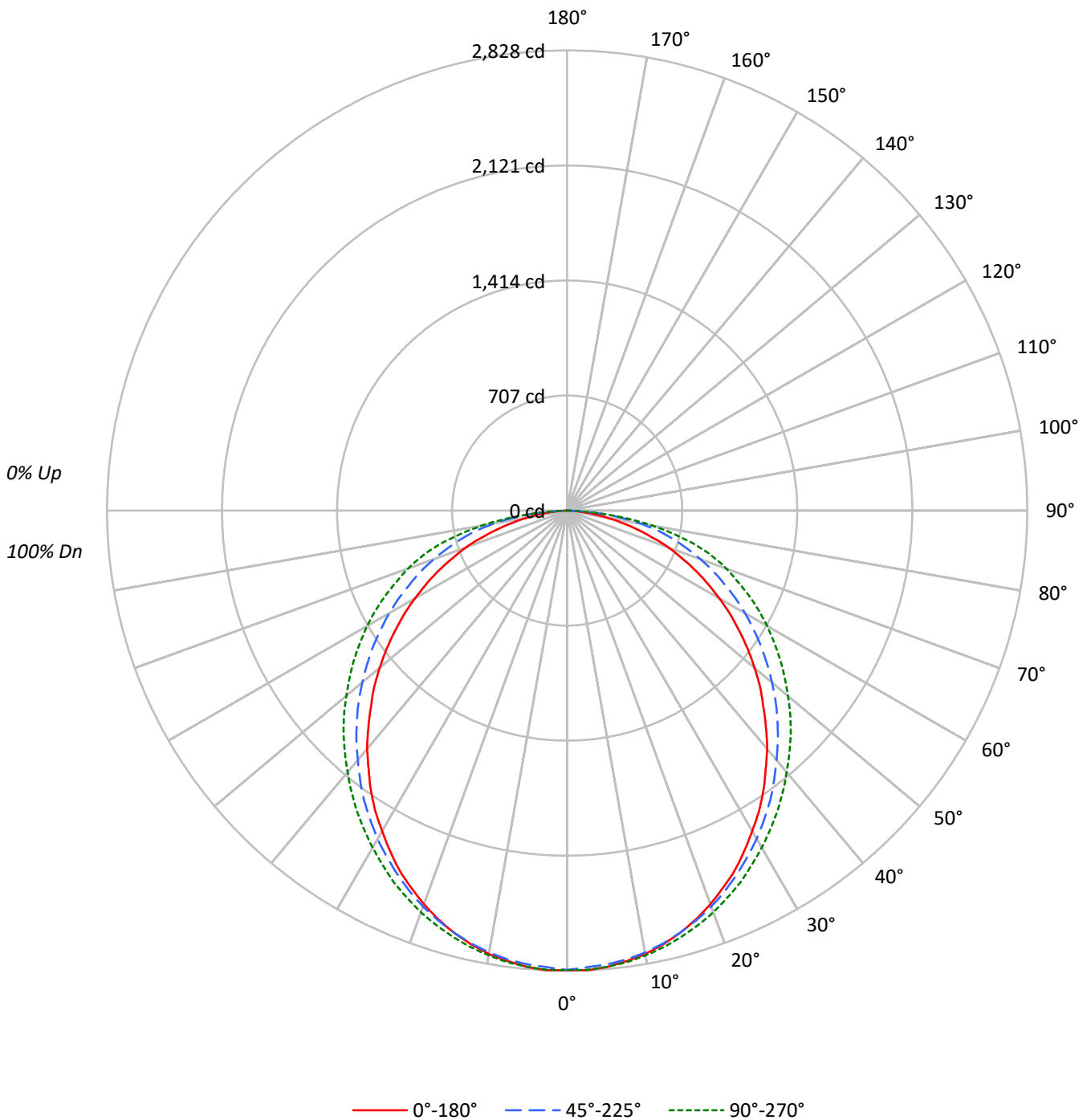
Lumens per Lamp: N/A  
Luminaire Lumens: 8171.2 lumens  
Efficiency: N/A  
Efficacy: 145.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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



TEST NUMBER: P473940  
CATALOG NUMBER: 24CZ2-80VHE-UNV-L850-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P473940

CATALOG NUMBER: 24CZ2-80VHE-UNV-L850-CD1-U

**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°	3799	3799	3799
5°	3801	3782	3801
10°	3780	3768	3793
15°	3742	3740	3777
20°	3686	3708	3761
25°	3622	3663	3743
30°	3534	3620	3716
35°	3454	3573	3701
40°	3360	3515	3687
45°	3245	3479	3698
50°	3147	3440	3708
55°	3032	3416	3750
60°	2906	3400	3819
65°	2769	3387	3917
70°	2607	3422	4098
75°	2292	3493	4262
80°	1913	3519	4112
85°	1365	3017	3057



TEST NUMBER: P473940

CATALOG NUMBER: 24CZ2-80VHE-UNV-L850-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	266.9	3.3
10°-20°	760.3	9.3
20°-30°	1140.6	14.0
30°-40°	1361.8	16.7
40°-50°	1410.5	17.3
50°-60°	1298.5	15.9
60°-70°	1047.5	12.8
70°-80°	684.4	8.4
80°-90°	200.7	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°	2167.8	26.5
0°-40°	3529.6	43.2
0°-60°	6238.7	76.3
0°-90°	8171.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8171.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2824	2824	2824	2824	2824	
5°	2814	2812	2800	2816	2814	267
15°	2686	2686	2685	2712	2712	757
25°	2440	2445	2467	2512	2521	1122
35°	2103	2121	2176	2235	2253	1314
45°	1706	1748	1828	1910	1943	1318
55°	1292	1348	1456	1563	1599	1157
65°	870	929	1064	1185	1230	860
75°	441	524	672	788	820	471
85°	88	153	195	207	198	110
90°	0	0	0	0	0	



TEST NUMBER: P473940

CATALOG NUMBER: 24CZ2-80VHE-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2823.7	2823.7	2823.7	2823.7	2823.7
2.5°	2827.6	2823.7	2809.2	2826.3	2825.0
5°	2814.4	2811.8	2799.9	2815.8	2814.4
7.5°	2793.3	2792.0	2782.8	2799.9	2799.9
10°	2766.9	2764.3	2757.7	2777.5	2776.2
12.5°	2729.9	2728.6	2724.7	2748.4	2747.1
15°	2686.4	2686.4	2685.1	2711.5	2711.5
17.5°	2633.6	2634.9	2640.2	2670.5	2671.9
20°	2574.2	2579.5	2590.0	2624.3	2627.0
22.5°	2506.9	2517.4	2531.9	2570.2	2574.2
25°	2439.5	2444.8	2467.2	2512.1	2521.4
27.5°	2357.7	2370.9	2399.9	2446.1	2455.4
30°	2274.5	2293.0	2330.0	2377.5	2392.0
32.5°	2192.7	2208.5	2252.1	2306.2	2323.4
35°	2102.9	2121.4	2175.5	2234.9	2253.4
37.5°	2003.9	2032.9	2089.7	2158.3	2178.1
40°	1912.8	1939.2	2001.3	2077.8	2098.9
42.5°	1808.5	1841.5	1916.8	1994.7	2021.1
45°	1705.6	1747.8	1828.3	1910.2	1943.2
47.5°	1609.2	1643.5	1738.6	1831.0	1860.0
50°	1503.6	1543.2	1643.5	1741.2	1771.6
52.5°	1399.3	1446.8	1548.5	1651.4	1684.4
55°	1292.4	1347.8	1456.1	1563.0	1598.6
57.5°	1189.4	1244.8	1357.1	1470.6	1507.5
60°	1079.8	1139.2	1263.3	1372.9	1419.1
62.5°	974.2	1033.6	1164.3	1283.1	1326.7
65°	869.9	929.3	1064.0	1185.4	1230.3
67.5°	761.7	826.4	970.3	1087.8	1131.3
70°	662.7	724.7	869.9	995.3	1041.6
72.5°	549.2	623.1	770.9	895.0	938.6
75°	440.9	524.1	671.9	788.1	819.8
77.5°	340.6	423.7	571.6	658.7	678.5
80°	246.9	331.3	454.1	514.8	530.7
82.5°	159.7	246.9	328.7	369.6	374.9
85°	88.4	153.1	195.4	207.3	198.0
87.5°	31.7	58.1	56.8	46.2	37.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)