

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: P388951

Luminaire Tested: **24CZ2-70VHE-UNV-L950-CD1-SWPD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P388951  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-70VHE-UNV-L950-CD1-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6321.0 lumens  
Efficiency: N/A  
Efficacy: 138.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

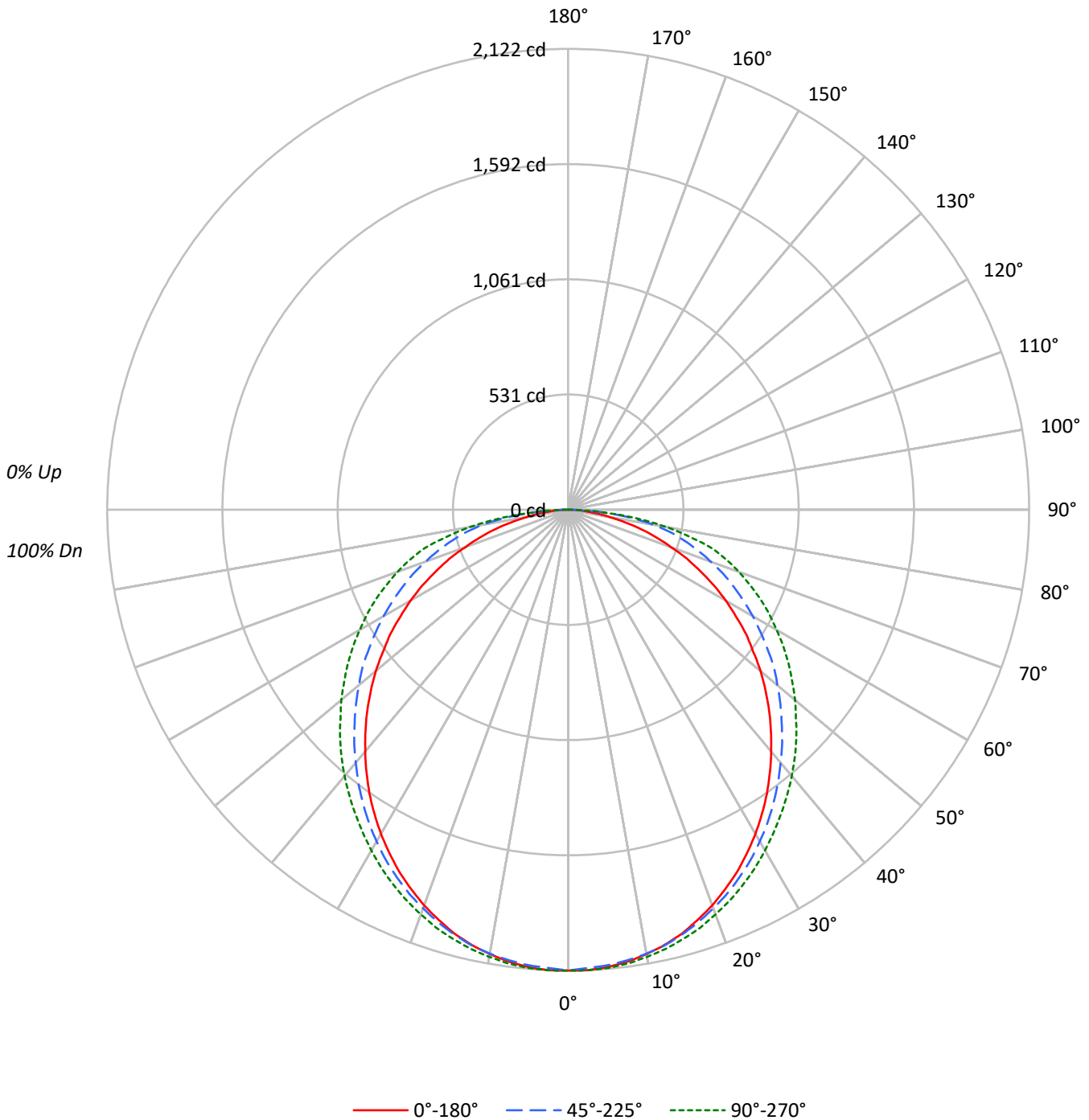
Input Watts (W): 45.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2856	2856	2856
5°	2855	2844	2861
10°	2839	2836	2856
15°	2815	2821	2850
20°	2776	2797	2839
25°	2731	2772	2828
30°	2678	2740	2815
35°	2620	2706	2807
40°	2553	2672	2812
45°	2489	2645	2826
50°	2420	2632	2853
55°	2346	2628	2905
60°	2254	2640	2980
65°	2136	2680	3110
70°	1983	2747	3286
75°	1810	2884	3564
80°	1488	3106	3563
85°	1139	2865	3061



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	200.7	3.2
10°-20°	573.0	9.1
20°-30°	862.3	13.6
30°-40°	1033.4	16.3
40°-50°	1076.9	17.0
50°-60°	1001.9	15.9
60°-70°	825.2	13.1
70°-80°	562.0	8.9
80°-90°	185.5	2.9
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°	1636.0	25.9
0°-40°	2669.4	42.2
0°-60°	4748.2	75.1
0°-90°	6321.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6321.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2122	2122	2122	2122	2122	
5°	2114	2114	2105	2116	2118	201
15°	2021	2023	2025	2044	2046	569
25°	1840	1848	1867	1899	1905	847
35°	1595	1614	1648	1692	1709	997
45°	1308	1335	1390	1460	1485	1009
55°	1000	1034	1120	1209	1238	891
65°	671	728	842	941	977	666
75°	348	426	555	654	686	367
85°	74	144	186	198	198	91
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2122.3	2122.3	2122.3	2122.3	2122.3
2.5°	2122.3	2122.3	2111.7	2122.3	2122.3
5°	2113.8	2113.8	2105.4	2115.9	2118.0
7.5°	2099.0	2101.2	2092.7	2105.4	2107.5
10°	2078.0	2080.1	2075.8	2088.5	2090.6
12.5°	2052.6	2054.7	2054.7	2069.5	2071.6
15°	2021.0	2023.1	2025.2	2044.2	2046.3
17.5°	1980.9	1987.2	1991.5	2014.7	2018.9
20°	1938.7	1945.0	1953.5	1978.8	1983.0
22.5°	1890.2	1898.6	1913.4	1940.8	1947.2
25°	1839.6	1848.0	1867.0	1898.6	1905.0
27.5°	1782.6	1795.3	1818.5	1852.2	1860.7
30°	1723.5	1736.2	1763.6	1799.5	1812.1
32.5°	1660.3	1677.1	1708.8	1748.9	1761.5
35°	1594.9	1613.8	1647.6	1691.9	1708.8
37.5°	1525.2	1546.3	1586.4	1634.9	1656.0
40°	1453.5	1478.8	1521.0	1578.0	1601.2
42.5°	1381.8	1405.0	1457.7	1518.9	1544.2
45°	1307.9	1335.4	1390.2	1459.8	1485.2
47.5°	1232.0	1259.4	1324.8	1398.7	1421.9
50°	1156.1	1183.5	1257.3	1335.4	1362.8
52.5°	1073.8	1109.6	1194.0	1272.1	1299.5
55°	999.9	1033.7	1120.2	1208.8	1238.3
57.5°	915.6	955.6	1050.6	1143.4	1175.0
60°	837.5	879.7	981.0	1075.9	1107.5
62.5°	757.3	803.8	911.3	1008.4	1044.3
65°	670.9	727.8	841.7	940.9	976.7
67.5°	592.8	651.9	772.1	873.4	905.0
70°	504.2	575.9	698.3	799.5	835.4
72.5°	428.2	500.0	628.7	727.8	763.7
75°	348.1	426.1	554.8	654.0	685.6
77.5°	267.9	354.4	483.1	559.0	569.6
80°	192.0	282.7	400.8	445.1	459.9
82.5°	135.0	217.3	295.3	324.9	333.3
85°	73.8	143.5	185.6	198.3	198.3
87.5°	31.6	61.2	73.8	75.9	78.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)