

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: P389907

Luminaire Tested: **24CZ2-75VHE-S-UNV-L940-CD1-SDWPD1-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: P389907  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-75VHE-S-UNV-L940-CD1-SDWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6709.9 lumens  
Efficiency: N/A  
Efficacy: 134.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

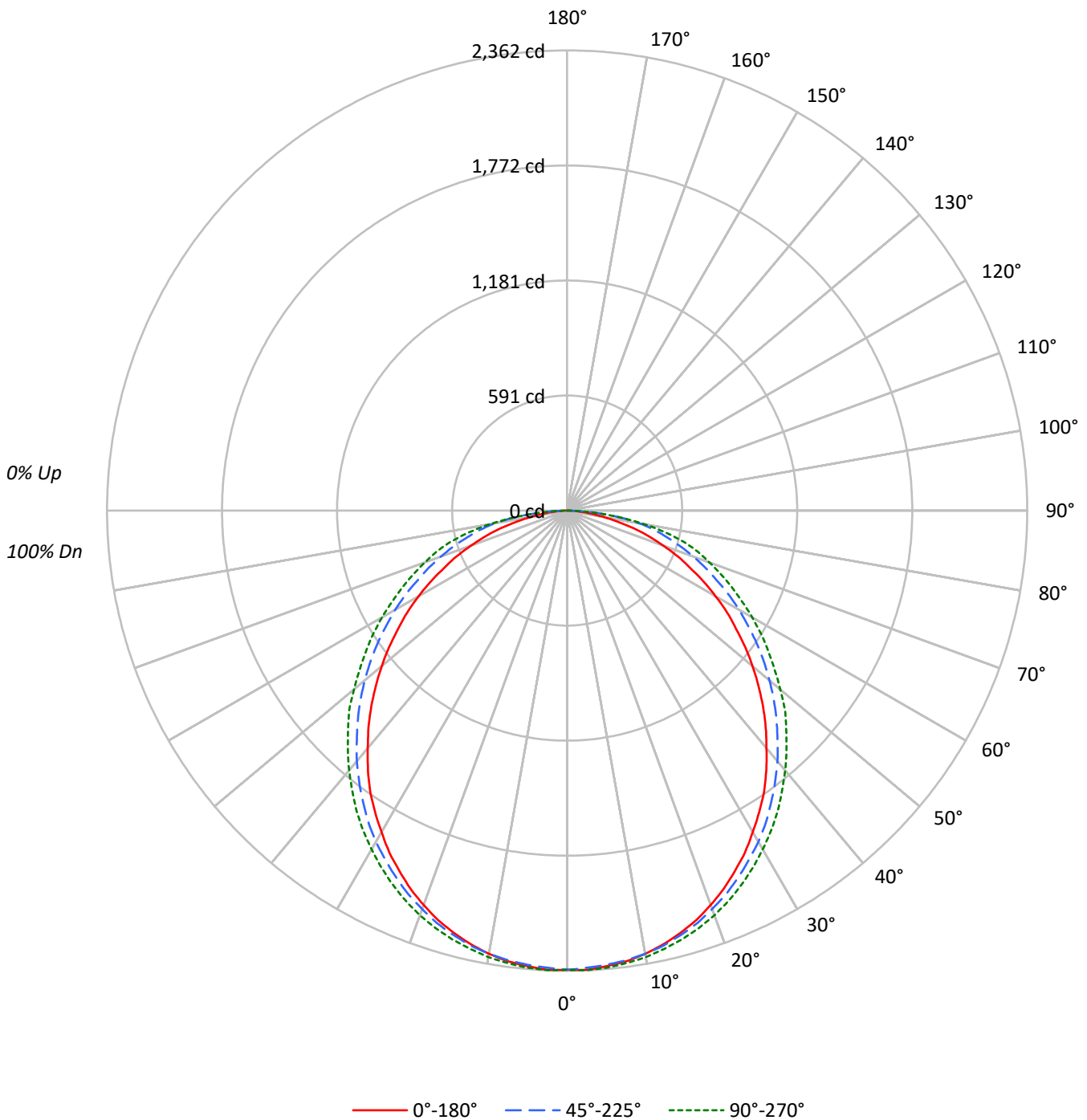
Input Watts (W): 49.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

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

	0°	45°	90°
0°	3172	3172	3172
5°	3169	3161	3181
10°	3156	3156	3180
15°	3126	3141	3174
20°	3085	3116	3165
25°	3028	3085	3145
30°	2960	3050	3119
35°	2895	3000	3095
40°	2796	2950	3058
45°	2705	2892	3025
50°	2601	2837	2989
55°	2485	2785	2960
60°	2369	2742	2954
65°	2219	2694	2972
70°	2054	2708	3052
75°	1839	2759	3224
80°	1486	2923	3154
85°	1119	2566	2501



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	223.2	3.3
10°-20°	637.7	9.5
20°-30°	958.5	14.3
30°-40°	1141.8	17.0
40°-50°	1168.5	17.4
50°-60°	1052.0	15.7
60°-70°	826.2	12.3
70°-80°	536.2	8.0
80°-90°	165.8	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°	1819.3	27.1
0°-40°	2961.1	44.1
0°-60°	5181.7	77.2
0°-90°	6709.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6709.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2357	2357	2357	2357	2357	
5°	2347	2351	2340	2353	2355	223
15°	2244	2251	2255	2274	2278	633
25°	2040	2057	2078	2112	2118	940
35°	1763	1784	1826	1871	1884	1100
45°	1422	1456	1520	1577	1590	1096
55°	1059	1106	1187	1249	1262	950
65°	697	750	846	916	934	694
75°	354	422	531	603	620	374
85°	72	134	166	162	162	88
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2357.2	2357.2	2357.2	2357.2	2357.2
2.5°	2359.4	2359.4	2348.7	2359.4	2361.5
5°	2346.6	2350.8	2340.2	2353.0	2355.1
7.5°	2333.8	2333.8	2327.4	2340.2	2342.3
10°	2310.3	2312.5	2310.3	2325.3	2327.4
12.5°	2280.5	2284.8	2286.9	2301.8	2303.9
15°	2244.3	2250.7	2254.9	2274.1	2278.4
17.5°	2203.8	2210.2	2220.8	2242.1	2246.4
20°	2154.8	2163.3	2176.1	2203.8	2210.2
22.5°	2101.5	2110.0	2131.3	2156.9	2167.5
25°	2039.7	2056.7	2078.0	2112.1	2118.5
27.5°	1977.9	1992.8	2020.5	2056.7	2065.2
30°	1905.4	1928.8	1962.9	1999.2	2007.7
32.5°	1835.1	1858.5	1899.0	1937.4	1948.0
35°	1762.6	1783.9	1826.5	1871.3	1884.1
37.5°	1679.5	1707.2	1754.1	1798.8	1811.6
40°	1592.1	1626.2	1679.5	1726.4	1741.3
42.5°	1509.0	1545.2	1598.5	1649.6	1666.7
45°	1421.6	1455.7	1519.6	1577.2	1590.0
47.5°	1332.1	1370.4	1438.6	1496.2	1517.5
50°	1242.6	1283.1	1355.5	1415.2	1428.0
52.5°	1153.0	1195.7	1272.4	1336.3	1342.7
55°	1059.3	1106.2	1187.1	1248.9	1261.7
57.5°	974.0	1014.5	1101.9	1165.8	1180.7
60°	880.2	925.0	1018.8	1078.4	1097.6
62.5°	790.7	837.6	935.6	995.3	1012.4
65°	696.9	750.2	846.1	916.5	933.5
67.5°	615.9	667.1	769.4	837.6	854.7
70°	522.2	579.7	688.4	758.7	775.8
72.5°	441.2	500.9	609.6	677.8	703.3
75°	353.8	422.0	530.7	603.2	620.2
77.5°	268.5	347.4	458.2	513.6	513.6
80°	191.8	274.9	377.2	402.8	407.1
82.5°	125.7	206.7	279.2	277.1	277.1
85°	72.5	134.3	166.2	162.0	162.0
87.5°	27.7	55.4	59.7	59.7	57.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)