

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: P389046

Luminaire Tested: **24CZ2-90VHE-UNV-L950-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: P389046
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: 24CZ2-90VHE-UNV-L950-CD1-SDWPD1-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: 8008.8 lumens
Efficiency: N/A
Efficacy: 129.6 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

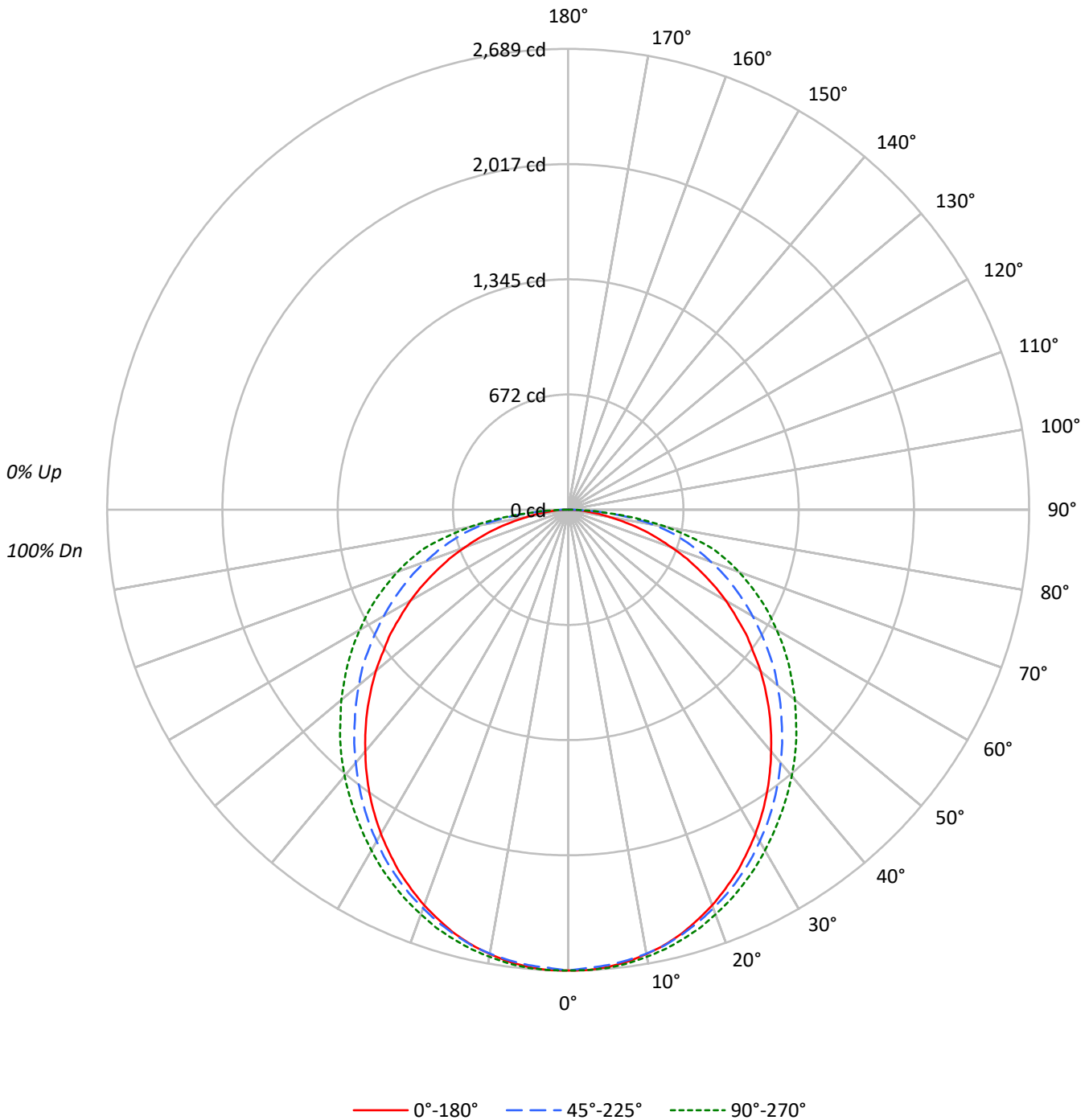
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3618	3618	3618
5°	3617	3603	3625
10°	3597	3593	3619
15°	3567	3574	3612
20°	3517	3544	3597
25°	3460	3512	3583
30°	3393	3472	3567
35°	3319	3429	3556
40°	3235	3385	3563
45°	3153	3352	3581
50°	3066	3334	3614
55°	2972	3329	3681
60°	2855	3345	3776
65°	2706	3395	3940
70°	2513	3480	4164
75°	2293	3655	4516
80°	1884	3935	4515
85°	1445	3631	3880



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.3	3.2
10°-20°	726.0	9.1
20°-30°	1092.6	13.6
30°-40°	1309.3	16.3
40°-50°	1364.4	17.0
50°-60°	1269.5	15.9
60°-70°	1045.5	13.1
70°-80°	712.1	8.9
80°-90°	235.1	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°	2072.9	25.9
0°-40°	3382.2	42.2
0°-60°	6016.1	75.1
0°-90°	8008.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8008.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2689	2689	2689	2689	2689	
5°	2678	2678	2668	2681	2684	254
15°	2561	2563	2566	2590	2593	721
25°	2331	2342	2366	2406	2414	1073
35°	2021	2045	2088	2144	2165	1263
45°	1657	1692	1761	1850	1882	1278
55°	1267	1310	1419	1532	1569	1129
65°	850	922	1066	1192	1238	844
75°	441	540	703	829	869	465
85°	94	182	235	251	251	116
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2688.9	2688.9	2688.9	2688.9	2688.9
2.5°	2688.9	2688.9	2675.6	2688.9	2688.9
5°	2678.2	2678.2	2667.5	2680.9	2683.6
7.5°	2659.5	2662.2	2651.5	2667.5	2670.2
10°	2632.8	2635.5	2630.1	2646.2	2648.8
12.5°	2600.7	2603.4	2603.4	2622.1	2624.8
15°	2560.6	2563.3	2566.0	2590.0	2592.7
17.5°	2509.8	2517.9	2523.2	2552.6	2558.0
20°	2456.4	2464.4	2475.1	2507.2	2512.5
22.5°	2394.9	2405.6	2424.3	2459.1	2467.1
25°	2330.8	2341.5	2365.5	2405.6	2413.6
27.5°	2258.6	2274.6	2304.0	2346.8	2357.5
30°	2183.8	2199.8	2234.5	2280.0	2296.0
32.5°	2103.6	2124.9	2165.0	2215.8	2231.9
35°	2020.7	2044.8	2087.5	2143.7	2165.0
37.5°	1932.5	1959.2	2010.0	2071.5	2098.2
40°	1841.6	1873.7	1927.2	1999.3	2028.7
42.5°	1750.7	1780.1	1847.0	1924.5	1956.6
45°	1657.2	1691.9	1761.4	1849.6	1881.7
47.5°	1561.0	1595.7	1678.6	1772.1	1801.5
50°	1464.7	1499.5	1593.0	1691.9	1726.7
52.5°	1360.5	1405.9	1512.9	1611.8	1646.5
55°	1266.9	1309.7	1419.3	1531.6	1569.0
57.5°	1160.0	1210.8	1331.1	1448.7	1488.8
60°	1061.1	1114.6	1242.9	1363.2	1403.3
62.5°	959.6	1018.4	1154.7	1277.6	1323.1
65°	850.0	922.1	1066.5	1192.1	1237.5
67.5°	751.1	825.9	978.3	1106.6	1146.7
70°	638.8	729.7	884.7	1013.0	1058.5
72.5°	542.6	633.5	796.5	922.1	967.6
75°	441.0	539.9	703.0	828.6	868.7
77.5°	339.5	449.0	612.1	708.3	721.7
80°	243.2	358.2	507.8	564.0	582.7
82.5°	171.1	275.3	374.2	411.6	422.3
85°	93.6	181.8	235.2	251.3	251.3
87.5°	40.1	77.5	93.6	96.2	98.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)