

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: P389037

Luminaire Tested: **24CZ2-90VHE-UNV-L930-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: P389037
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-L930-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7287.7 lumens
Efficiency: N/A
Efficacy: 117.9 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

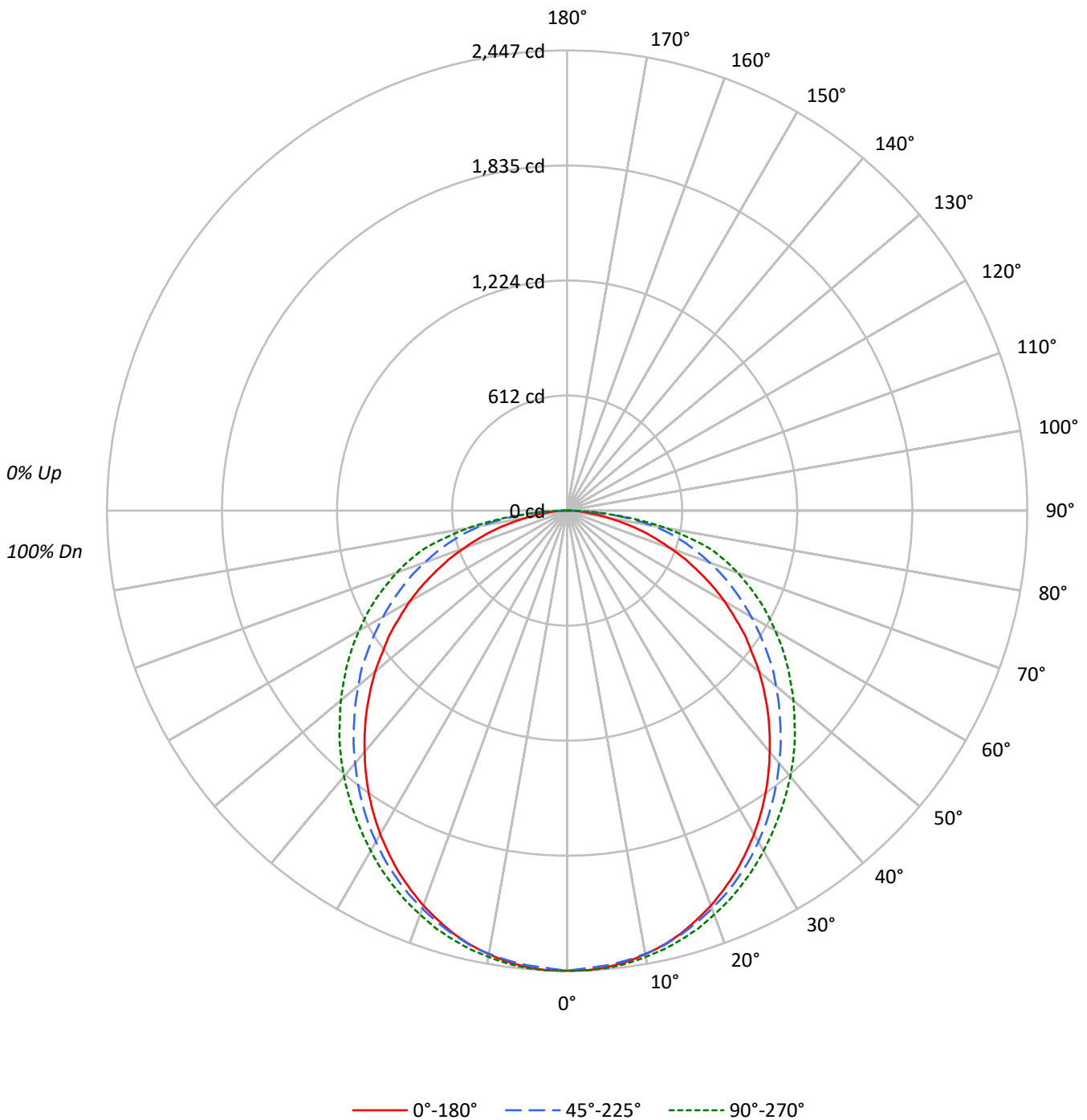
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3292	3292	3292
5°	3292	3279	3298
10°	3273	3270	3293
15°	3246	3252	3286
20°	3200	3225	3274
25°	3149	3196	3261
30°	3087	3159	3246
35°	3020	3120	3236
40°	2943	3080	3243
45°	2869	3050	3258
50°	2790	3034	3289
55°	2704	3030	3349
60°	2598	3043	3436
65°	2462	3090	3585
70°	2287	3167	3789
75°	2086	3326	4109
80°	1715	3581	4108
85°	1314	3304	3529



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.4	3.2
10°-20°	660.7	9.1
20°-30°	994.2	13.6
30°-40°	1191.4	16.3
40°-50°	1241.6	17.0
50°-60°	1155.2	15.9
60°-70°	951.4	13.1
70°-80°	647.9	8.9
80°-90°	213.9	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°	1886.2	25.9
0°-40°	3077.7	42.2
0°-60°	5474.4	75.1
0°-90°	7287.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7287.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2447	2447	2447	2447	2447	
5°	2437	2437	2427	2440	2442	231
15°	2330	2332	2335	2357	2359	656
25°	2121	2131	2152	2189	2196	976
35°	1839	1861	1900	1951	1970	1149
45°	1508	1540	1603	1683	1712	1163
55°	1153	1192	1292	1394	1428	1028
65°	773	839	970	1085	1126	768
75°	401	491	640	754	790	423
85°	85	165	214	229	229	106
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2446.8	2446.8	2446.8	2446.8	2446.8
2.5°	2446.8	2446.8	2434.7	2446.8	2446.8
5°	2437.1	2437.1	2427.4	2439.5	2442.0
7.5°	2420.1	2422.5	2412.8	2427.4	2429.8
10°	2395.7	2398.2	2393.3	2407.9	2410.3
12.5°	2366.6	2369.0	2369.0	2386.0	2388.4
15°	2330.1	2332.5	2334.9	2356.8	2359.3
17.5°	2283.9	2291.2	2296.0	2322.8	2327.6
20°	2235.2	2242.5	2252.2	2281.4	2286.3
22.5°	2179.3	2189.0	2206.0	2237.6	2244.9
25°	2120.9	2130.6	2152.5	2189.0	2196.3
27.5°	2055.2	2069.8	2096.6	2135.5	2145.2
30°	1987.1	2001.7	2033.3	2074.7	2089.3
32.5°	1914.2	1933.6	1970.1	2016.3	2030.9
35°	1838.8	1860.7	1899.6	1950.6	1970.1
37.5°	1758.5	1782.8	1829.0	1885.0	1909.3
40°	1675.8	1705.0	1753.6	1819.3	1846.1
42.5°	1593.1	1619.9	1680.7	1751.2	1780.4
45°	1508.0	1539.6	1602.8	1683.1	1712.3
47.5°	1420.4	1452.0	1527.4	1612.6	1639.3
50°	1332.9	1364.5	1449.6	1539.6	1571.2
52.5°	1238.0	1279.4	1376.6	1466.6	1498.3
55°	1152.9	1191.8	1291.5	1393.7	1427.7
57.5°	1055.6	1101.8	1211.2	1318.3	1354.8
60°	965.6	1014.2	1131.0	1240.4	1276.9
62.5°	873.2	926.7	1050.7	1162.6	1204.0
65°	773.4	839.1	970.5	1084.8	1126.1
67.5°	683.5	751.6	890.2	1006.9	1043.4
70°	581.3	664.0	805.1	921.8	963.2
72.5°	493.7	576.4	724.8	839.1	880.5
75°	401.3	491.3	639.7	754.0	790.5
77.5°	308.9	408.6	557.0	644.5	656.7
80°	221.3	325.9	462.1	513.2	530.2
82.5°	155.7	250.5	340.5	374.6	384.3
85°	85.1	165.4	214.0	228.6	228.6
87.5°	36.5	70.5	85.1	87.6	90.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)