

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: P390937

Luminaire Tested: **24CZ2-110VHE-HRP-UNV-L935-CD2-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: P390937
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-HRP-UNV-L935-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7865.9 lumens
Efficiency: N/A
Efficacy: 101.6 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

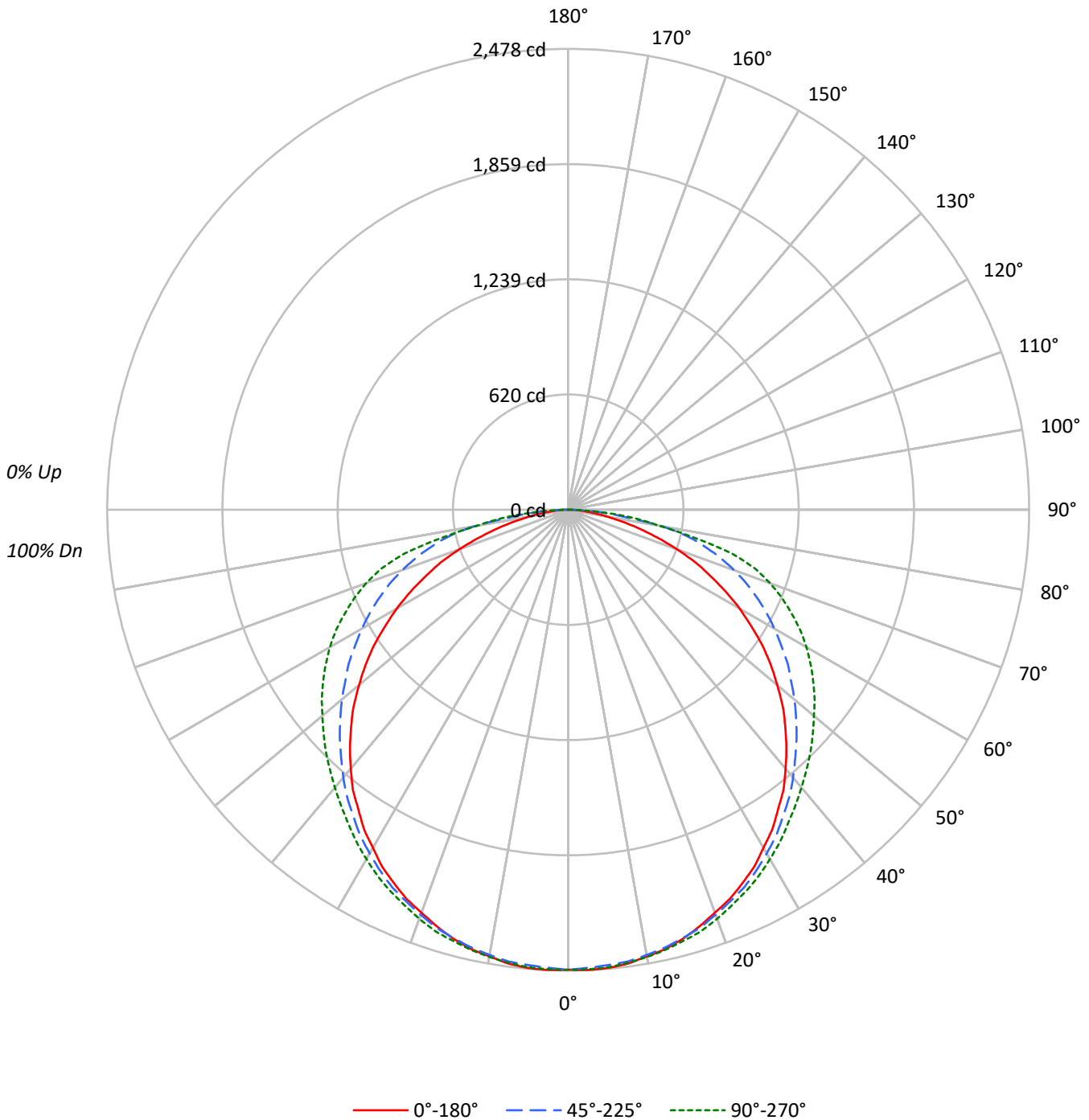
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3328	3328	3328
5°	3341	3320	3336
10°	3332	3321	3337
15°	3326	3321	3342
20°	3302	3318	3352
25°	3290	3325	3359
30°	3261	3316	3370
35°	3230	3307	3384
40°	3193	3303	3426
45°	3140	3304	3504
50°	3071	3324	3610
55°	2993	3377	3771
60°	2866	3444	3979
65°	2683	3565	4223
70°	2441	3730	4543
75°	2069	3935	4746
80°	1633	3960	3839
85°	1204	3012	3373



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	234.6	3.0
10°-20°	675.3	8.6
20°-30°	1032.7	13.1
30°-40°	1262.4	16.0
40°-50°	1345.5	17.1
50°-60°	1286.5	16.4
60°-70°	1089.8	13.9
70°-80°	732.4	9.3
80°-90°	206.6	2.6
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°	1942.6	24.7
0°-40°	3205.1	40.7
0°-60°	5837.0	74.2
0°-90°	7865.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7865.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2474	2474	2474	2474	2474	
5°	2474	2470	2458	2470	2470	235
15°	2388	2388	2384	2403	2400	673
25°	2216	2224	2240	2259	2263	1021
35°	1966	1982	2013	2052	2060	1232
45°	1650	1678	1736	1810	1842	1273
55°	1276	1323	1440	1553	1608	1136
65°	843	929	1120	1268	1326	837
75°	398	542	757	886	913	426
85°	78	160	195	211	218	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2473.6	2473.6	2473.6	2473.6	2473.6
2.5°	2477.5	2477.5	2465.8	2473.6	2473.6
5°	2473.6	2469.7	2458.0	2469.7	2469.7
7.5°	2461.9	2458.0	2450.2	2461.9	2458.0
10°	2438.5	2438.5	2430.7	2442.4	2442.4
12.5°	2419.0	2415.1	2411.2	2426.8	2422.9
15°	2387.8	2387.8	2383.9	2403.4	2399.5
17.5°	2348.8	2352.7	2356.6	2372.2	2376.1
20°	2305.8	2313.6	2317.5	2340.9	2340.9
22.5°	2266.8	2270.7	2278.5	2301.9	2301.9
25°	2216.1	2223.9	2239.5	2259.0	2262.9
27.5°	2165.4	2169.3	2188.8	2216.1	2220.0
30°	2099.0	2110.8	2134.2	2165.4	2169.3
32.5°	2040.5	2052.2	2079.5	2110.8	2118.6
35°	1966.4	1982.0	2013.2	2052.2	2060.0
37.5°	1900.1	1911.8	1950.8	1993.7	2005.4
40°	1818.1	1841.5	1880.6	1931.3	1950.8
42.5°	1736.2	1759.6	1806.4	1872.8	1896.2
45°	1650.4	1677.7	1736.2	1810.3	1841.5
47.5°	1564.5	1595.7	1662.1	1747.9	1783.0
50°	1467.0	1506.0	1587.9	1685.5	1724.5
52.5°	1373.4	1420.2	1509.9	1619.2	1669.9
55°	1275.8	1322.6	1439.7	1552.8	1607.5
57.5°	1166.6	1229.0	1357.7	1486.5	1545.0
60°	1065.1	1123.7	1279.7	1420.2	1478.7
62.5°	955.9	1033.9	1201.7	1349.9	1408.5
65°	842.7	928.6	1119.8	1268.0	1326.5
67.5°	741.3	834.9	1037.8	1186.1	1244.6
70°	620.4	737.4	948.1	1096.3	1154.9
72.5°	507.2	636.0	854.4	998.8	1053.4
75°	398.0	542.3	756.9	885.7	913.0
77.5°	296.5	448.7	655.5	710.1	690.6
80°	210.7	358.9	511.1	483.8	495.5
82.5°	136.6	273.1	316.0	358.9	370.6
85°	78.0	160.0	195.1	210.7	218.5
87.5°	35.1	58.5	78.0	78.0	74.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)