

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: P390936

Luminaire Tested: **24CZ2-110VHE-HRP-UNV-L935-CD2-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: P390936
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-SDWPD1-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: 7771.0 lumens
Efficiency: N/A
Efficacy: 100.4 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

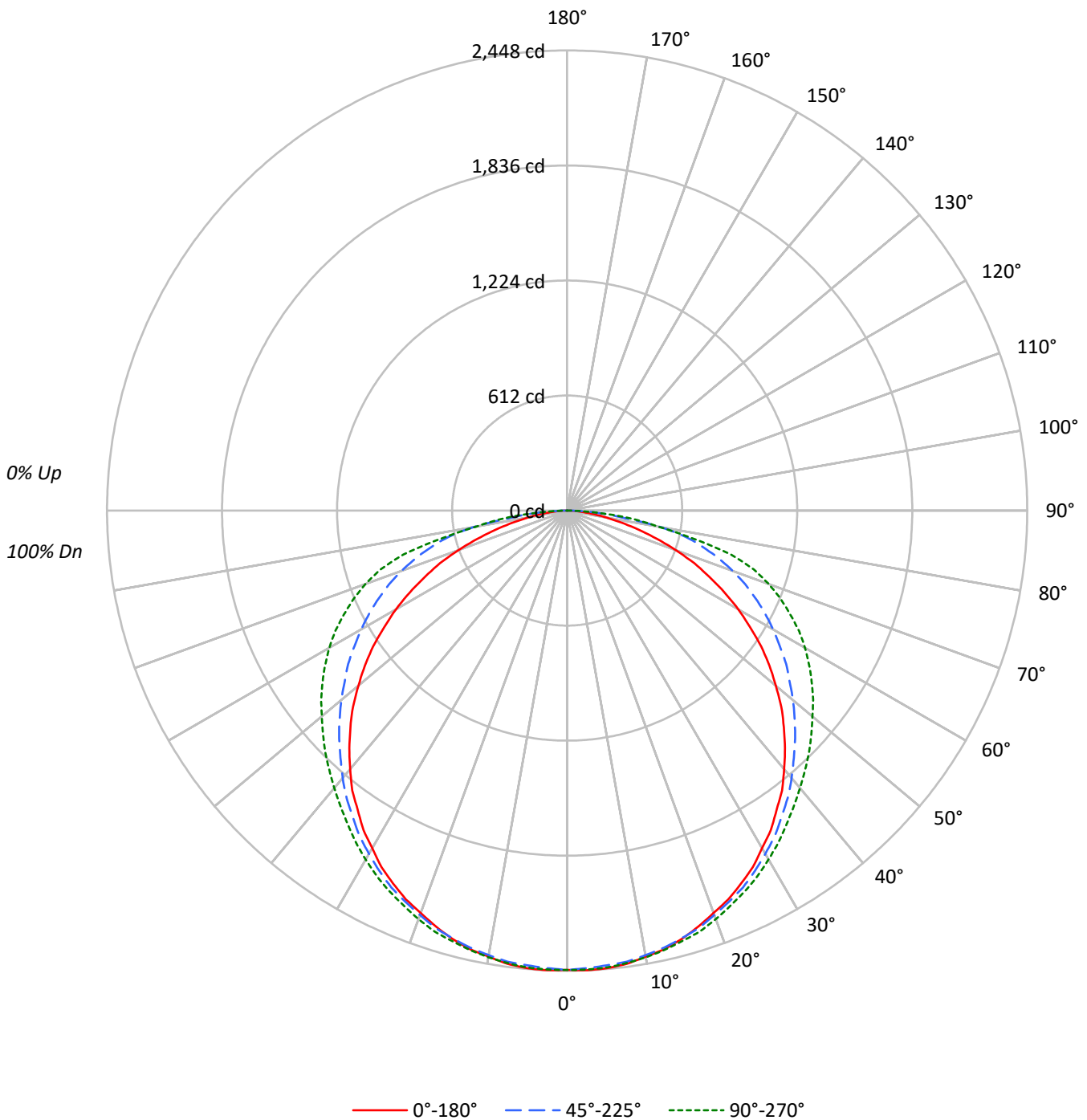
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3288	3288	3288
5°	3301	3280	3295
10°	3291	3281	3297
15°	3286	3281	3302
20°	3262	3278	3311
25°	3250	3285	3319
30°	3222	3276	3330
35°	3191	3267	3343
40°	3155	3263	3385
45°	3103	3264	3462
50°	3034	3284	3566
55°	2957	3336	3725
60°	2832	3402	3931
65°	2651	3522	4172
70°	2411	3685	4488
75°	2044	3887	4689
80°	1612	3912	3793
85°	1190	2975	3333



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.8	3.0
10°-20°	667.2	8.6
20°-30°	1020.2	13.1
30°-40°	1247.2	16.0
40°-50°	1329.3	17.1
50°-60°	1271.0	16.4
60°-70°	1076.7	13.9
70°-80°	723.6	9.3
80°-90°	204.1	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°	1919.2	24.7
0°-40°	3166.4	40.7
0°-60°	5766.6	74.2
0°-90°	7771.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7771.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2444	2444	2444	2444	2444	
5°	2444	2440	2428	2440	2440	232
15°	2359	2359	2355	2374	2370	665
25°	2189	2197	2212	2232	2236	1009
35°	1943	1958	1989	2028	2035	1217
45°	1630	1657	1715	1788	1819	1258
55°	1260	1307	1422	1534	1588	1123
65°	833	917	1106	1253	1310	827
75°	393	536	748	875	902	421
85°	77	158	193	208	216	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2443.8	2443.8	2443.8	2443.8	2443.8
2.5°	2447.6	2447.6	2436.0	2443.8	2443.8
5°	2443.8	2439.9	2428.3	2439.9	2439.9
7.5°	2432.2	2428.3	2420.6	2432.2	2428.3
10°	2409.1	2409.1	2401.4	2412.9	2412.9
12.5°	2389.8	2385.9	2382.1	2397.5	2393.6
15°	2359.0	2359.0	2355.1	2374.4	2370.5
17.5°	2320.4	2324.3	2328.1	2343.5	2347.4
20°	2278.0	2285.7	2289.6	2312.7	2312.7
22.5°	2239.5	2243.3	2251.0	2274.2	2274.2
25°	2189.4	2197.1	2212.5	2231.8	2235.6
27.5°	2139.3	2143.1	2162.4	2189.4	2193.2
30°	2073.7	2085.3	2108.4	2139.3	2143.1
32.5°	2015.9	2027.5	2054.5	2085.3	2093.0
35°	1942.7	1958.1	1988.9	2027.5	2035.2
37.5°	1877.1	1888.7	1927.3	1969.7	1981.2
40°	1796.2	1819.3	1857.9	1908.0	1927.3
42.5°	1715.3	1738.4	1784.6	1850.2	1873.3
45°	1630.5	1657.4	1715.3	1788.5	1819.3
47.5°	1545.7	1576.5	1642.0	1726.8	1761.5
50°	1449.3	1487.8	1568.8	1665.1	1703.7
52.5°	1356.8	1403.0	1491.7	1599.6	1649.7
55°	1260.4	1306.7	1422.3	1534.1	1588.1
57.5°	1152.5	1214.2	1341.4	1468.6	1526.4
60°	1052.3	1110.1	1264.3	1403.0	1460.9
62.5°	944.4	1021.4	1187.2	1333.7	1391.5
65°	832.6	917.4	1106.2	1252.7	1310.5
67.5°	732.4	824.9	1025.3	1171.8	1229.6
70°	612.9	728.5	936.6	1083.1	1140.9
72.5°	501.1	628.3	844.1	986.8	1040.7
75°	393.2	535.8	747.8	875.0	902.0
77.5°	292.9	443.3	647.6	701.5	682.2
80°	208.1	354.6	504.9	478.0	489.5
82.5°	134.9	269.8	312.2	354.6	366.2
85°	77.1	158.0	192.7	208.1	215.9
87.5°	34.7	57.8	77.1	77.1	73.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)