

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: P388608

Luminaire Tested: **24CZ2-110VHE-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: P388608
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: 24CZ2-110VHE-UNV-L935-CD2-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9155.0 lumens
Efficiency: N/A
Efficacy: 118.3 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

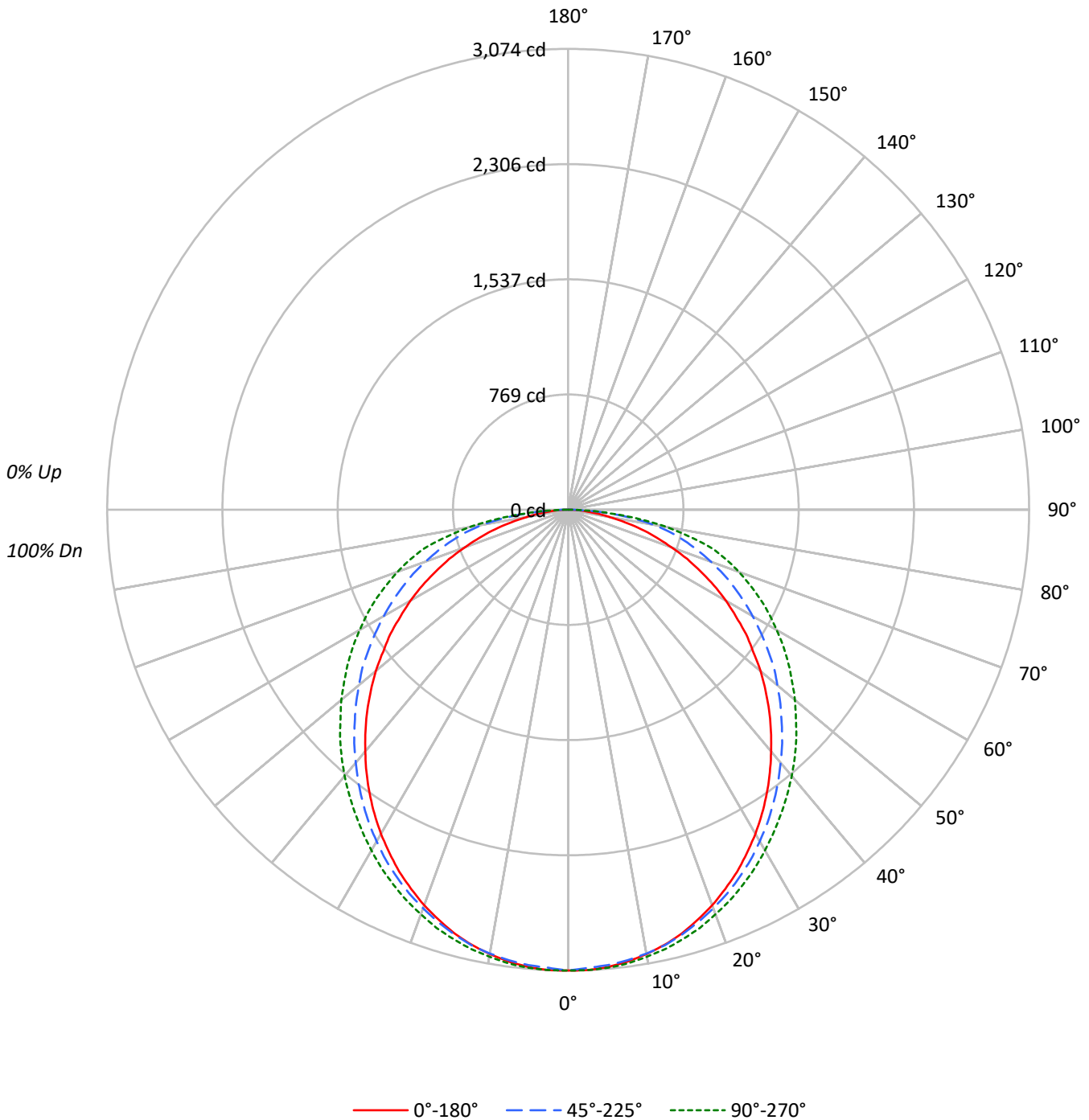
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	4136	4136	4136
5°	4135	4118	4143
10°	4112	4108	4137
15°	4077	4086	4128
20°	4020	4051	4112
25°	3955	4014	4096
30°	3878	3968	4078
35°	3794	3920	4065
40°	3698	3869	4073
45°	3605	3831	4093
50°	3505	3812	4132
55°	3397	3806	4207
60°	3264	3823	4317
65°	3093	3881	4504
70°	2873	3978	4760
75°	2621	4178	5162
80°	2154	4498	5161
85°	1650	4151	4434



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	290.7	3.2
10°-20°	829.9	9.1
20°-30°	1248.9	13.6
30°-40°	1496.7	16.3
40°-50°	1559.7	17.0
50°-60°	1451.1	15.9
60°-70°	1195.2	13.1
70°-80°	814.0	8.9
80°-90°	268.7	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°	2369.6	25.9
0°-40°	3866.3	42.2
0°-60°	6877.1	75.1
0°-90°	9155.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9155.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3074	3074	3074	3074	3074	
5°	3062	3062	3049	3065	3068	291
15°	2927	2930	2933	2961	2964	825
25°	2664	2677	2704	2750	2759	1227
35°	2310	2337	2386	2450	2475	1444
45°	1894	1934	2014	2114	2151	1461
55°	1448	1497	1622	1751	1794	1291
65°	972	1054	1219	1363	1415	964
75°	504	617	804	947	993	532
85°	107	208	269	287	287	133
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3073.8	3073.8	3073.8	3073.8	3073.8
2.5°	3073.8	3073.8	3058.5	3073.8	3073.8
5°	3061.5	3061.5	3049.3	3064.6	3067.6
7.5°	3040.1	3043.2	3031.0	3049.3	3052.4
10°	3009.6	3012.7	3006.5	3024.9	3027.9
12.5°	2972.9	2976.0	2976.0	2997.4	3000.4
15°	2927.1	2930.2	2933.2	2960.7	2963.8
17.5°	2869.0	2878.2	2884.3	2917.9	2924.0
20°	2807.9	2817.1	2829.3	2866.0	2872.1
22.5°	2737.7	2749.9	2771.3	2811.0	2820.2
25°	2664.3	2676.6	2704.1	2749.9	2759.1
27.5°	2581.8	2600.2	2633.8	2682.7	2694.9
30°	2496.3	2514.6	2554.3	2606.3	2624.6
32.5°	2404.6	2429.1	2474.9	2532.9	2551.3
35°	2309.9	2337.4	2386.3	2450.5	2474.9
37.5°	2209.1	2239.6	2297.7	2368.0	2398.5
40°	2105.2	2141.9	2203.0	2285.5	2319.1
42.5°	2001.3	2034.9	2111.3	2199.9	2236.6
45°	1894.4	1934.1	2013.5	2114.4	2151.0
47.5°	1784.4	1824.1	1918.8	2025.7	2059.4
50°	1674.4	1714.1	1821.0	1934.1	1973.8
52.5°	1555.2	1607.2	1729.4	1842.4	1882.1
55°	1448.3	1497.2	1622.4	1750.8	1793.5
57.5°	1326.1	1384.1	1521.6	1656.0	1701.9
60°	1213.0	1274.1	1420.8	1558.3	1604.1
62.5°	1096.9	1164.1	1319.9	1460.5	1512.4
65°	971.6	1054.1	1219.1	1362.7	1414.7
67.5°	858.6	944.1	1118.3	1264.9	1310.8
70°	730.2	834.1	1011.3	1158.0	1209.9
72.5°	620.3	724.1	910.5	1054.1	1106.1
75°	504.1	617.2	803.6	947.2	993.0
77.5°	388.0	513.3	699.7	809.7	825.0
80°	278.0	409.4	580.5	644.7	666.1
82.5°	195.5	314.7	427.8	470.5	482.8
85°	106.9	207.8	268.9	287.2	287.2
87.5°	45.8	88.6	106.9	110.0	113.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)