

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: P388331

Luminaire Tested: **24CZ2-110VHE-SQR-UNV-L950-CD2-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: P388331
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-SQR-UNV-L950-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9663.9 lumens
Efficiency: N/A
Efficacy: 124.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

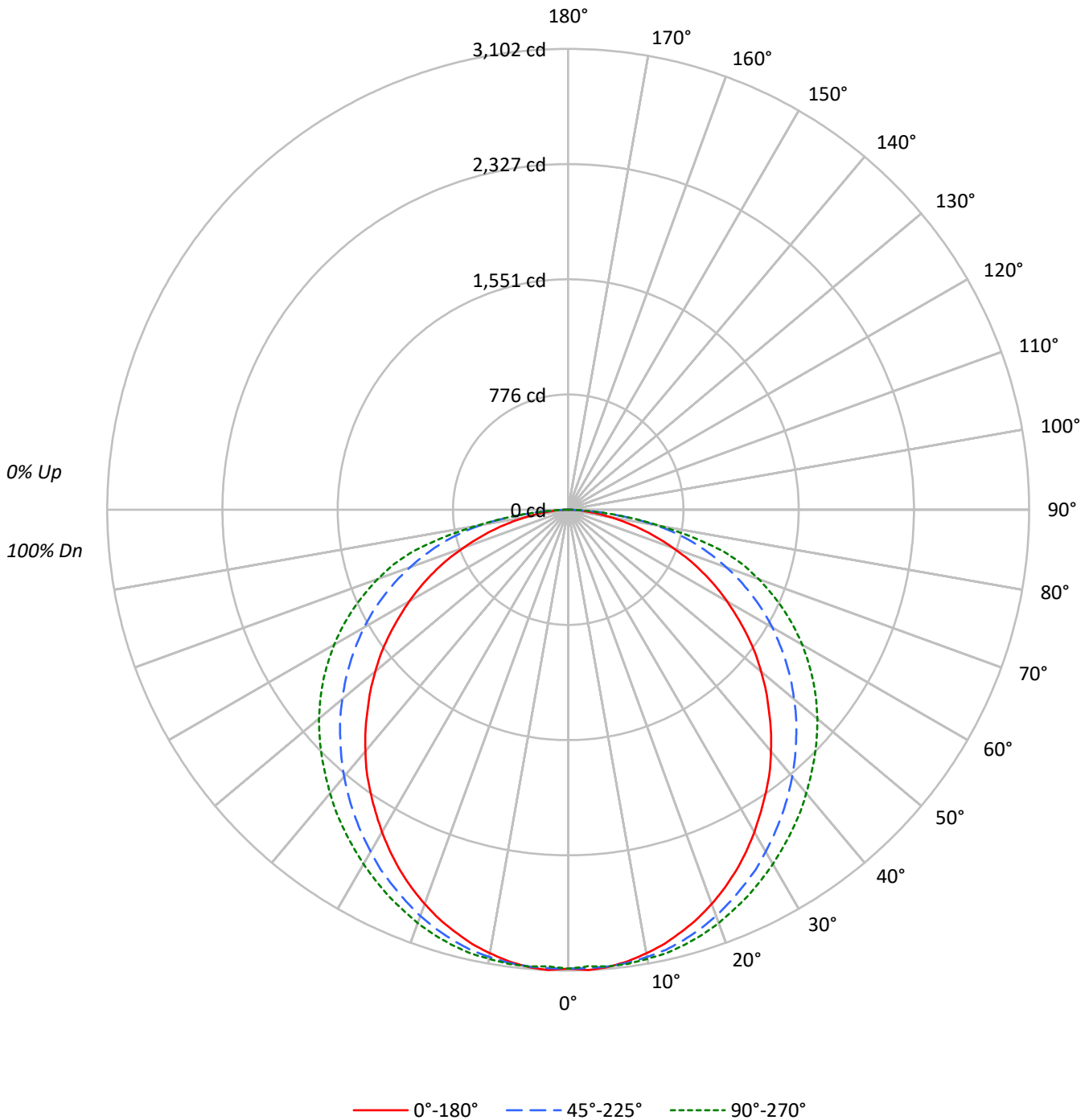
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20			20			20			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	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4156	4156	4156
5°	4172	4168	4168
10°	4142	4177	4194
15°	4098	4178	4223
20°	4044	4167	4240
25°	3975	4145	4254
30°	3892	4130	4279
35°	3811	4120	4319
40°	3727	4120	4378
45°	3631	4129	4463
50°	3547	4155	4582
55°	3443	4199	4723
60°	3323	4268	4895
65°	3180	4348	5100
70°	2950	4457	5360
75°	2671	4612	5607
80°	2250	4623	4822
85°	1724	3498	3498



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	293.2	3.0
10°-20°	843.6	8.7
20°-30°	1281.4	13.3
30°-40°	1558.7	16.1
40°-50°	1659.5	17.2
50°-60°	1580.6	16.4
60°-70°	1321.8	13.7
70°-80°	881.3	9.1
80°-90°	243.9	2.5
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°	2418.3	25.0
0°-40°	3976.9	41.2
0°-60°	7217.0	74.7
0°-90°	9663.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9663.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3089	3089	3089	3089	3089	
5°	3089	3070	3086	3086	3086	293
15°	2942	2949	3000	3022	3032	830
25°	2677	2712	2792	2840	2866	1233
35°	2320	2387	2508	2591	2630	1452
45°	1908	2010	2170	2291	2346	1475
55°	1468	1596	1790	1947	2014	1312
65°	999	1146	1366	1535	1602	987
75°	514	676	887	1037	1079	544
85°	112	207	227	223	227	135
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3089.1	3089.1	3089.1	3089.1	3089.1
2.5°	3101.8	3079.5	3089.1	3089.1	3076.3
5°	3089.1	3069.9	3085.9	3085.9	3085.9
7.5°	3066.7	3050.8	3076.3	3082.7	3082.7
10°	3031.6	3025.2	3057.1	3066.7	3069.9
12.5°	2993.3	2990.1	3034.8	3047.6	3057.1
15°	2942.3	2948.6	2999.7	3022.0	3031.6
17.5°	2888.0	2900.8	2958.2	2990.1	2999.7
20°	2824.2	2843.3	2910.3	2942.3	2961.4
22.5°	2754.0	2782.7	2852.9	2891.2	2913.5
25°	2677.4	2712.5	2792.3	2840.1	2865.7
27.5°	2594.4	2639.1	2731.6	2785.9	2811.4
30°	2505.1	2556.1	2658.2	2722.1	2754.0
32.5°	2412.5	2473.2	2584.8	2655.1	2693.3
35°	2320.0	2387.0	2508.3	2591.2	2629.5
37.5°	2227.4	2294.5	2428.5	2517.8	2565.7
40°	2122.1	2201.9	2345.5	2444.4	2492.3
42.5°	2020.0	2106.2	2259.3	2367.8	2418.9
45°	1908.3	2010.4	2170.0	2291.3	2345.5
47.5°	1806.2	1908.3	2080.6	2208.3	2268.9
50°	1694.5	1803.0	1984.9	2125.3	2189.1
52.5°	1586.0	1697.7	1889.2	2039.2	2103.0
55°	1467.9	1595.6	1790.2	1946.6	2013.6
57.5°	1349.9	1487.1	1688.1	1850.9	1917.9
60°	1235.0	1375.4	1586.0	1748.8	1819.0
62.5°	1120.1	1260.5	1480.7	1646.6	1713.7
65°	998.8	1145.6	1365.8	1535.0	1602.0
67.5°	877.6	1030.7	1250.9	1420.1	1483.9
70°	749.9	912.7	1132.9	1298.8	1362.6
72.5°	631.9	794.6	1011.6	1174.4	1235.0
75°	513.8	676.5	887.1	1037.1	1078.6
77.5°	398.9	561.6	749.9	848.9	858.4
80°	290.4	443.6	596.7	625.5	622.3
82.5°	194.7	331.9	411.7	414.9	424.4
85°	111.7	207.4	226.6	223.4	226.6
87.5°	44.7	73.4	63.8	47.9	47.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)