

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: P388330

Luminaire Tested: **24CZ2-110VHE-SQR-UNV-L950-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: P388330
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-SWPD1-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: 9544.0 lumens
Efficiency: N/A
Efficacy: 123.3 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

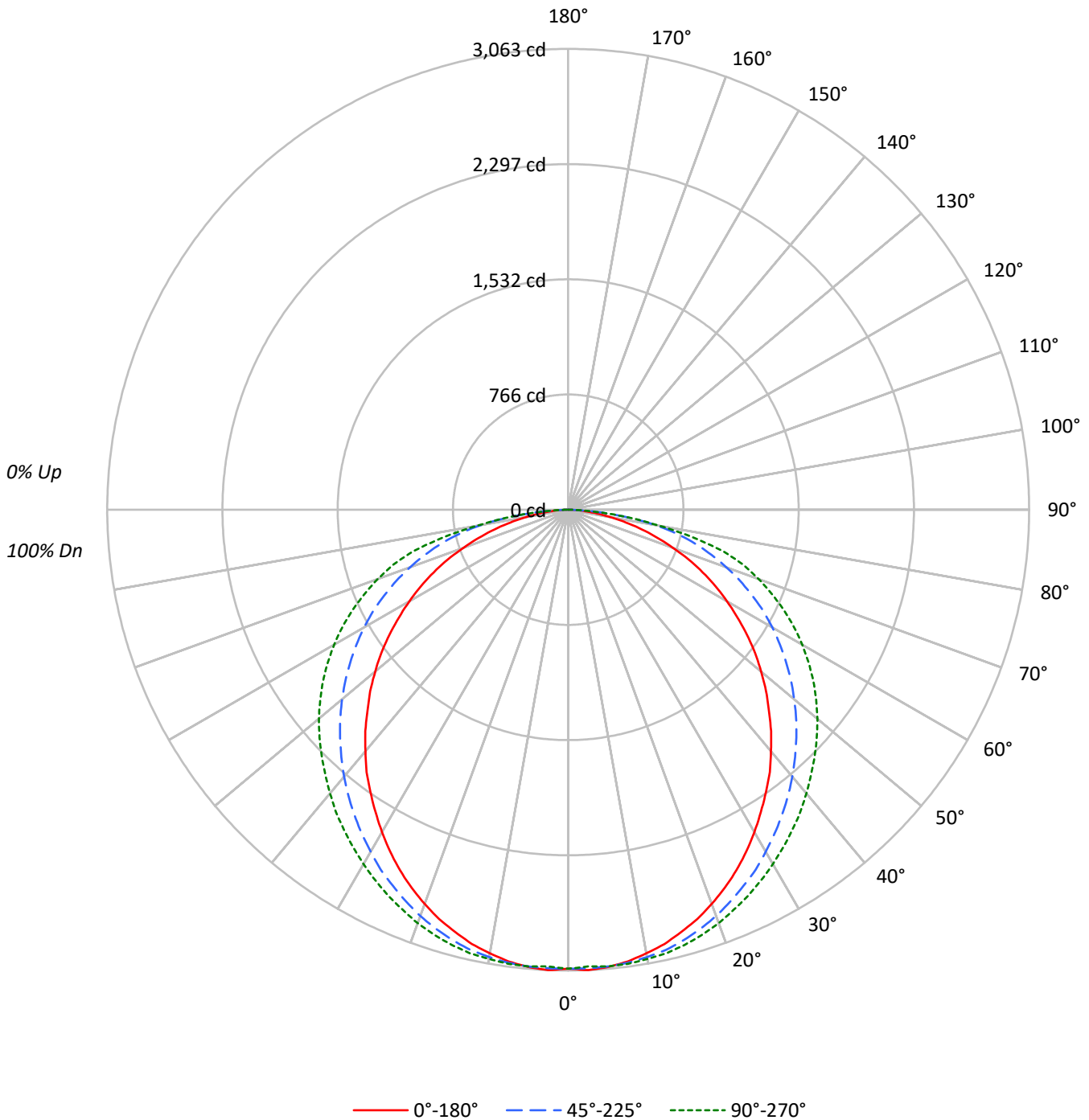
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
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°	4105	4105	4105
5°	4120	4116	4116
10°	4091	4125	4142
15°	4048	4127	4171
20°	3994	4115	4188
25°	3926	4094	4202
30°	3844	4079	4226
35°	3763	4069	4266
40°	3681	4069	4323
45°	3586	4078	4408
50°	3503	4103	4526
55°	3401	4147	4665
60°	3282	4215	4834
65°	3140	4294	5037
70°	2913	4401	5294
75°	2638	4554	5538
80°	2222	4566	4762
85°	1703	3455	3455



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	289.6	3.0
10°-20°	833.2	8.7
20°-30°	1265.5	13.3
30°-40°	1539.3	16.1
40°-50°	1638.9	17.2
50°-60°	1561.0	16.4
60°-70°	1305.4	13.7
70°-80°	870.3	9.1
80°-90°	240.8	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°	2388.3	25.0
0°-40°	3927.6	41.2
0°-60°	7127.4	74.7
0°-90°	9544.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9544.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3051	3051	3051	3051	3051	
5°	3051	3032	3048	3048	3048	289
15°	2906	2912	2962	2984	2994	819
25°	2644	2679	2758	2805	2830	1217
35°	2291	2357	2477	2559	2597	1434
45°	1885	1986	2143	2263	2316	1457
55°	1450	1576	1768	1922	1989	1296
65°	986	1131	1349	1516	1582	975
75°	507	668	876	1024	1065	538
85°	110	205	224	221	224	133
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3050.7	3050.7	3050.7	3050.7	3050.7
2.5°	3063.3	3041.3	3050.7	3050.7	3038.1
5°	3050.7	3031.8	3047.6	3047.6	3047.6
7.5°	3028.7	3012.9	3038.1	3044.4	3044.4
10°	2994.0	2987.7	3019.2	3028.7	3031.8
12.5°	2956.2	2953.0	2997.2	3009.8	3019.2
15°	2905.8	2912.1	2962.5	2984.5	2994.0
17.5°	2852.2	2864.8	2921.5	2953.0	2962.5
20°	2789.1	2808.1	2874.2	2905.8	2924.7
22.5°	2719.8	2748.2	2817.5	2855.3	2877.4
25°	2644.2	2678.8	2757.6	2804.9	2830.1
27.5°	2562.2	2606.4	2697.8	2751.3	2776.5
30°	2474.0	2524.4	2625.3	2688.3	2719.8
32.5°	2382.6	2442.5	2552.8	2622.1	2659.9
35°	2291.2	2357.4	2477.1	2559.1	2596.9
37.5°	2199.8	2266.0	2398.4	2486.6	2533.9
40°	2095.8	2174.6	2316.4	2414.1	2461.4
42.5°	1994.9	2080.0	2231.3	2338.5	2388.9
45°	1884.6	1985.5	2143.1	2262.8	2316.4
47.5°	1783.8	1884.6	2054.8	2180.9	2240.8
50°	1673.5	1780.6	1960.3	2099.0	2162.0
52.5°	1566.3	1676.6	1865.7	2013.9	2076.9
55°	1449.7	1575.8	1768.0	1922.5	1988.6
57.5°	1333.1	1468.6	1667.2	1827.9	1894.1
60°	1219.7	1358.3	1566.3	1727.1	1796.4
62.5°	1106.2	1244.9	1462.3	1626.2	1692.4
65°	986.4	1131.4	1348.9	1515.9	1582.1
67.5°	866.7	1018.0	1235.4	1402.5	1465.5
70°	740.6	901.4	1118.8	1282.7	1345.7
72.5°	624.0	784.7	999.1	1159.8	1219.7
75°	507.4	668.1	876.1	1024.3	1065.2
77.5°	393.9	554.7	740.6	838.3	847.8
80°	286.8	438.1	589.3	617.7	614.6
82.5°	192.2	327.8	406.6	409.7	419.2
85°	110.3	204.9	223.8	220.6	223.8
87.5°	44.1	72.5	63.0	47.3	47.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)