

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: P388325

Luminaire Tested: **24CZ2-110VHE-SQR-UNV-L935-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: P388325
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-L935-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9011.4 lumens
Efficiency: N/A
Efficacy: 116.4 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

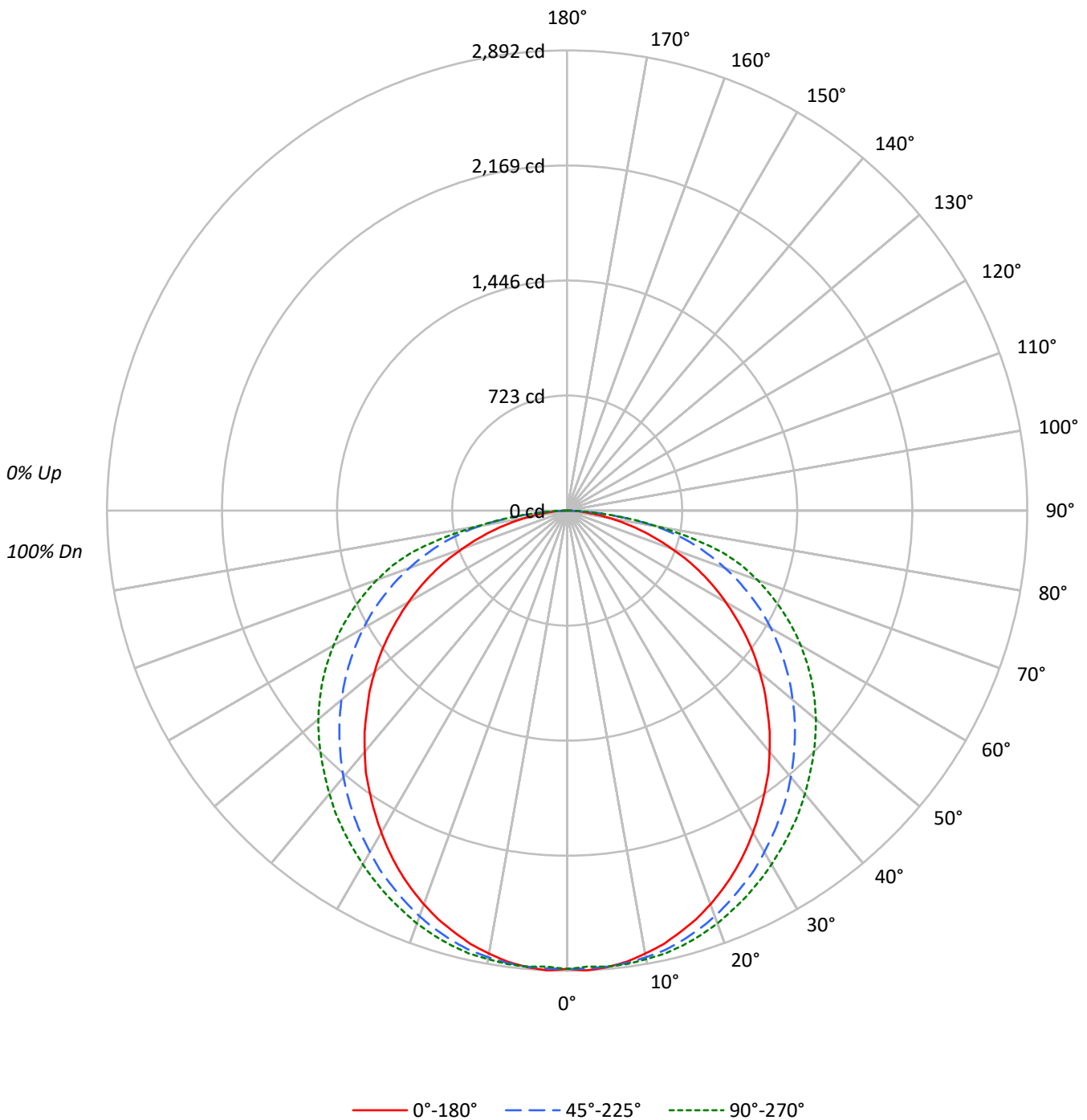
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3876	3876	3876
5°	3890	3886	3886
10°	3862	3895	3911
15°	3822	3896	3938
20°	3771	3886	3954
25°	3706	3865	3967
30°	3629	3851	3990
35°	3553	3842	4028
40°	3476	3841	4082
45°	3386	3850	4162
50°	3307	3874	4273
55°	3211	3916	4405
60°	3099	3980	4564
65°	2965	4055	4756
70°	2751	4156	4998
75°	2491	4300	5229
80°	2098	4312	4496
85°	1607	3262	3262



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.4	3.0
10°-20°	786.7	8.7
20°-30°	1194.9	13.3
30°-40°	1453.4	16.1
40°-50°	1547.4	17.2
50°-60°	1473.9	16.4
60°-70°	1232.6	13.7
70°-80°	821.8	9.1
80°-90°	227.4	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°	2255.0	25.0
0°-40°	3708.4	41.2
0°-60°	6729.7	74.7
0°-90°	9011.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9011.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2880	2880	2880	2880	2880	
5°	2880	2863	2878	2878	2878	273
15°	2744	2750	2797	2818	2827	774
25°	2497	2529	2604	2648	2672	1149
35°	2163	2226	2339	2416	2452	1354
45°	1780	1875	2024	2137	2187	1376
55°	1369	1488	1669	1815	1878	1224
65°	931	1068	1274	1431	1494	920
75°	479	631	827	967	1006	508
85°	104	193	211	208	211	126
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2880.5	2880.5	2880.5	2880.5	2880.5
2.5°	2892.4	2871.6	2880.5	2880.5	2868.6
5°	2880.5	2862.6	2877.5	2877.5	2877.5
7.5°	2859.7	2844.8	2868.6	2874.5	2874.5
10°	2826.9	2821.0	2850.7	2859.7	2862.6
12.5°	2791.2	2788.2	2829.9	2841.8	2850.7
15°	2743.6	2749.6	2797.2	2818.0	2826.9
17.5°	2693.0	2704.9	2758.5	2788.2	2797.2
20°	2633.5	2651.4	2713.8	2743.6	2761.5
22.5°	2568.0	2594.8	2660.3	2696.0	2716.8
25°	2496.6	2529.3	2603.7	2648.4	2672.2
27.5°	2419.2	2460.9	2547.2	2597.8	2621.6
30°	2335.9	2383.5	2478.8	2538.3	2568.0
32.5°	2249.6	2306.2	2410.3	2475.8	2511.5
35°	2163.3	2225.8	2338.9	2416.3	2452.0
37.5°	2077.0	2139.5	2264.5	2347.8	2392.5
40°	1978.8	2053.2	2187.1	2279.4	2324.0
42.5°	1883.6	1964.0	2106.8	2208.0	2255.6
45°	1779.5	1874.7	2023.5	2136.6	2187.1
47.5°	1684.2	1779.5	1940.2	2059.2	2115.7
50°	1580.1	1681.3	1850.9	1981.8	2041.3
52.5°	1478.9	1583.1	1761.6	1901.5	1961.0
55°	1368.8	1487.9	1669.4	1815.2	1877.7
57.5°	1258.7	1386.7	1574.1	1725.9	1788.4
60°	1151.6	1282.5	1478.9	1630.7	1696.2
62.5°	1044.5	1175.4	1380.7	1535.5	1598.0
65°	931.4	1068.3	1273.6	1431.3	1493.8
67.5°	818.3	961.2	1166.5	1324.2	1383.7
70°	699.3	851.1	1056.4	1211.1	1270.6
72.5°	589.2	741.0	943.3	1095.1	1151.6
75°	479.1	630.8	827.2	967.1	1005.8
77.5°	372.0	523.7	699.3	791.5	800.5
80°	270.8	413.6	556.5	583.2	580.3
82.5°	181.5	309.5	383.9	386.8	395.8
85°	104.1	193.4	211.3	208.3	211.3
87.5°	41.7	68.4	59.5	44.6	44.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)