

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: P388320

Luminaire Tested: **24CZ2-110VHE-SQR-UNV-L930-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: P388320
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-L930-CD2-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8580.0 lumens
Efficiency: N/A
Efficacy: 110.9 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

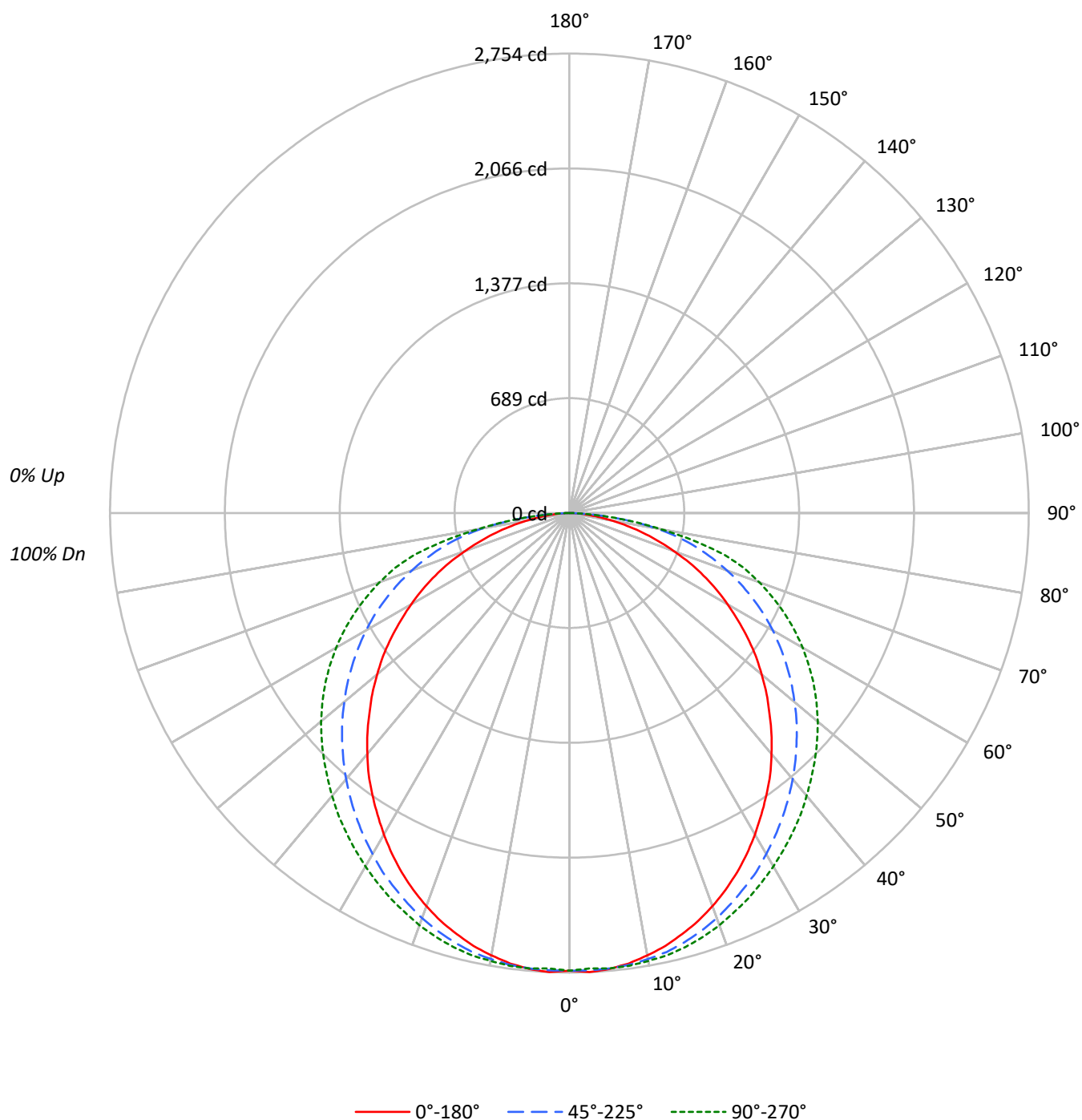
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20
RC	80					70					50					30					10
RW	70	50	30	10		70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																					
0	119	119	119	119		116	116	116	116		111	111	111		106	106	106		102	102	102
1	108	103	98	94		105	100	96	92		96	93	89		92	89	87		89	86	84
2	98	89	81	75		95	87	80	74		83	78	73		80	75	71		77	73	69
3	89	77	69	62		86	76	68	61		73	66	60		70	64	59		67	62	58
4	81	68	59	52		78	67	58	52		64	57	51		62	55	50		60	54	49
5	74	61	51	44		72	60	51	44		57	50	44		55	49	43		54	48	43
6	68	55	45	39		66	54	45	38		52	44	38		50	43	38		48	42	37
7	63	49	40	34		62	49	40	34		47	39	34		45	39	33		44	38	33
8	59	45	36	30		57	44	36	30		43	35	30		42	35	30		40	34	30
9	55	41	33	27		54	41	33	27		39	32	27		38	32	27		37	31	27
10	52	38	30	25		50	37	30	24		36	29	24		36	29	24		35	29	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3690	3690	3690
5°	3704	3700	3700
10°	3677	3708	3724
15°	3639	3710	3749
20°	3590	3700	3765
25°	3529	3680	3777
30°	3455	3667	3799
35°	3383	3658	3835
40°	3309	3658	3887
45°	3224	3666	3962
50°	3149	3689	4068
55°	3057	3729	4194
60°	2951	3789	4346
65°	2823	3861	4528
70°	2619	3957	4759
75°	2372	4094	4978
80°	1998	4105	4281
85°	1531	3106	3106



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	260.3	3.0
10°-20°	749.0	8.7
20°-30°	1137.7	13.3
30°-40°	1383.8	16.1
40°-50°	1473.3	17.2
50°-60°	1403.3	16.4
60°-70°	1173.5	13.7
70°-80°	782.4	9.1
80°-90°	216.5	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°	2147.0	25.0
0°-40°	3530.9	41.2
0°-60°	6407.5	74.7
0°-90°	8580.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8580.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2743	2743	2743	2743	2743	
5°	2743	2726	2740	2740	2740	260
15°	2612	2618	2663	2683	2692	737
25°	2377	2408	2479	2522	2544	1094
35°	2060	2119	2227	2301	2335	1289
45°	1694	1785	1927	2034	2082	1310
55°	1303	1417	1590	1728	1788	1165
65°	887	1017	1213	1363	1422	876
75°	456	601	788	921	958	483
85°	99	184	201	198	201	120
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2742.6	2742.6	2742.6	2742.6	2742.6
2.5°	2753.9	2734.1	2742.6	2742.6	2731.3
5°	2742.6	2725.6	2739.8	2739.8	2739.8
7.5°	2722.8	2708.6	2731.3	2736.9	2736.9
10°	2691.6	2685.9	2714.3	2722.8	2725.6
12.5°	2657.6	2654.8	2694.4	2705.8	2714.3
15°	2612.3	2617.9	2663.3	2683.1	2691.6
17.5°	2564.1	2575.4	2626.4	2654.8	2663.3
20°	2507.4	2524.4	2583.9	2612.3	2629.3
22.5°	2445.1	2470.6	2532.9	2566.9	2586.8
25°	2377.1	2408.3	2479.1	2521.6	2544.3
27.5°	2303.4	2343.1	2425.3	2473.4	2496.1
30°	2224.1	2269.4	2360.1	2416.8	2445.1
32.5°	2141.9	2195.8	2294.9	2357.3	2391.3
35°	2059.8	2119.3	2226.9	2300.6	2334.6
37.5°	1977.6	2037.1	2156.1	2235.4	2277.9
40°	1884.1	1954.9	2082.4	2170.3	2212.8
42.5°	1793.4	1869.9	2005.9	2102.3	2147.6
45°	1694.3	1784.9	1926.6	2034.3	2082.4
47.5°	1603.6	1694.3	1847.3	1960.6	2014.4
50°	1504.5	1600.8	1762.3	1886.9	1943.6
52.5°	1408.1	1507.3	1677.3	1810.4	1867.1
55°	1303.3	1416.6	1589.5	1728.3	1787.8
57.5°	1198.5	1320.3	1498.8	1643.3	1702.8
60°	1096.5	1221.1	1408.1	1552.6	1615.0
62.5°	994.5	1119.1	1314.6	1462.0	1521.5
65°	886.8	1017.1	1212.6	1362.8	1422.3
67.5°	779.1	915.1	1110.6	1260.8	1317.5
70°	665.8	810.3	1005.8	1153.1	1209.8
72.5°	561.0	705.5	898.1	1042.6	1096.5
75°	456.2	600.6	787.6	920.8	957.6
77.5°	354.2	498.7	665.8	753.6	762.1
80°	257.8	393.8	529.8	555.3	552.5
82.5°	172.8	294.7	365.5	368.3	376.8
85°	99.2	184.2	201.2	198.3	201.2
87.5°	39.7	65.2	56.7	42.5	42.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)