

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: P389543

Luminaire Tested: **24CZ2-110VHE-S-UNV-L930-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: P389543
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-S-UNV-L930-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9621.2 lumens
Efficiency: N/A
Efficacy: 124.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

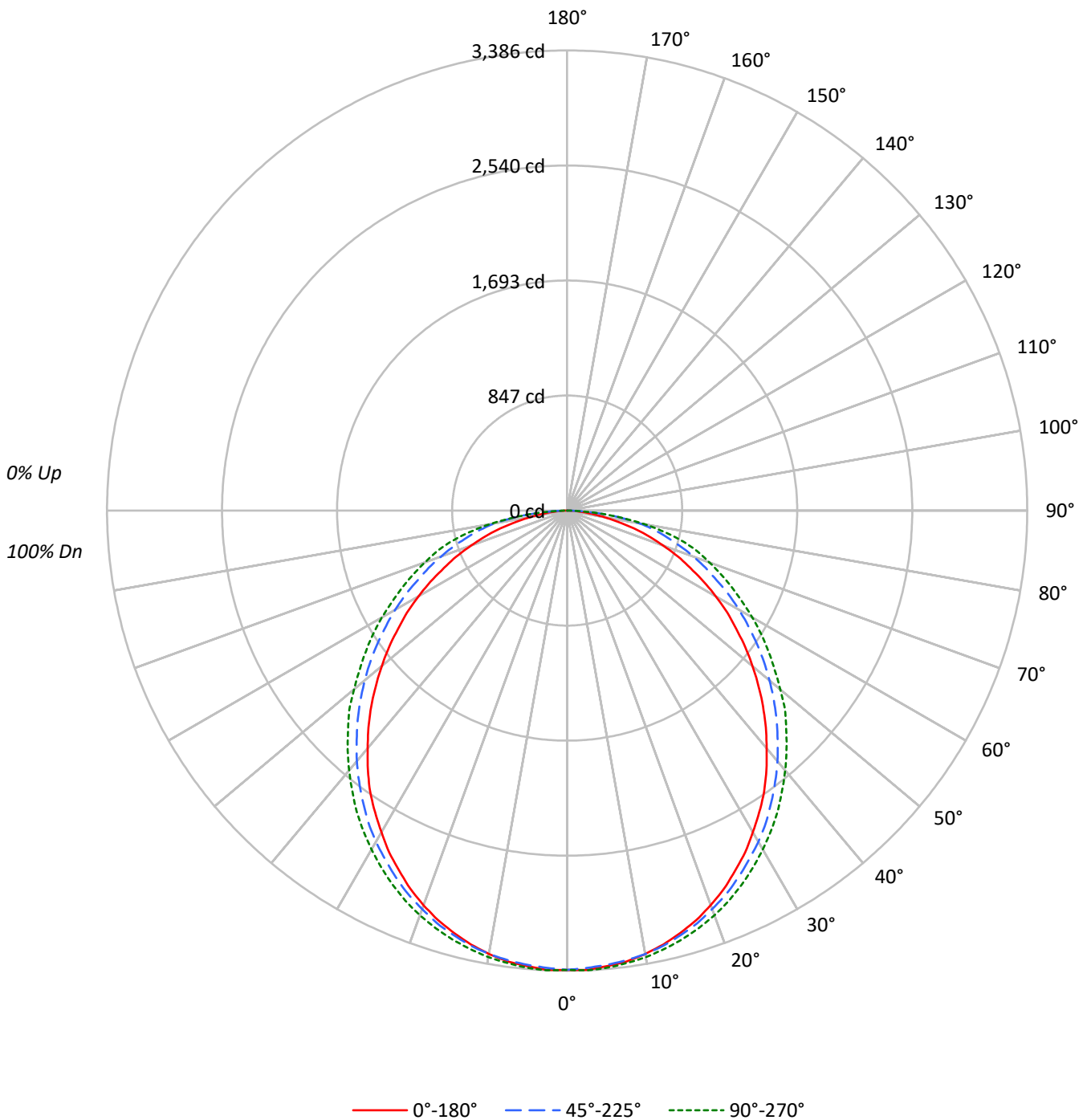
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74		81	76	72		78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62		71	66	61		69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53		63	57	52		61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46		57	50	45		55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40		52	45	40		50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35		47	40	35		46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32		43	36	31		42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28		40	33	28		39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4548	4548	4548
5°	4544	4532	4561
10°	4526	4526	4559
15°	4483	4504	4551
20°	4424	4468	4538
25°	4342	4423	4510
30°	4245	4373	4473
35°	4151	4302	4437
40°	4010	4230	4385
45°	3879	4146	4338
50°	3729	4068	4286
55°	3563	3993	4244
60°	3396	3931	4235
65°	3181	3863	4261
70°	2945	3883	4376
75°	2637	3956	4623
80°	2131	4191	4523
85°	1604	3680	3586



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	320.0	3.3
10°-20°	914.3	9.5
20°-30°	1374.4	14.3
30°-40°	1637.1	17.0
40°-50°	1675.5	17.4
50°-60°	1508.5	15.7
60°-70°	1184.6	12.3
70°-80°	768.9	8.0
80°-90°	237.8	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°	2608.7	27.1
0°-40°	4245.9	44.1
0°-60°	7429.9	77.2
0°-90°	9621.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9621.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3380	3380	3380	3380	3380	
5°	3365	3371	3356	3374	3377	320
15°	3218	3227	3233	3261	3267	907
25°	2925	2949	2980	3028	3038	1347
35°	2527	2558	2619	2683	2702	1577
45°	2038	2087	2179	2262	2280	1572
55°	1519	1586	1702	1791	1809	1362
65°	999	1076	1213	1314	1338	995
75°	507	605	761	865	889	537
85°	104	192	238	232	232	125
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3380.0	3380.0	3380.0	3380.0	3380.0
2.5°	3383.0	3383.0	3367.8	3383.0	3386.1
5°	3364.7	3370.8	3355.5	3373.9	3376.9
7.5°	3346.4	3346.4	3337.2	3355.5	3358.6
10°	3312.8	3315.8	3312.8	3334.1	3337.2
12.5°	3270.0	3276.1	3279.1	3300.5	3303.6
15°	3218.0	3227.2	3233.3	3260.8	3266.9
17.5°	3160.0	3169.1	3184.4	3215.0	3221.1
20°	3089.7	3101.9	3120.2	3160.0	3169.1
22.5°	3013.3	3025.5	3056.0	3092.7	3108.0
25°	2924.6	2949.1	2979.6	3028.5	3037.7
27.5°	2836.0	2857.4	2897.1	2949.1	2961.3
30°	2732.1	2765.7	2814.6	2866.6	2878.8
32.5°	2631.3	2664.9	2722.9	2777.9	2793.2
35°	2527.4	2557.9	2619.0	2683.2	2701.5
37.5°	2408.2	2447.9	2515.1	2579.3	2597.6
40°	2282.9	2331.8	2408.2	2475.4	2496.8
42.5°	2163.7	2215.6	2292.0	2365.4	2389.8
45°	2038.4	2087.3	2179.0	2261.5	2279.8
47.5°	1910.0	1965.0	2062.8	2145.3	2175.9
50°	1781.7	1839.7	1943.6	2029.2	2047.6
52.5°	1653.3	1714.4	1824.5	1916.1	1925.3
55°	1518.9	1586.1	1702.2	1790.8	1809.2
57.5°	1396.6	1454.7	1580.0	1671.7	1693.1
60°	1262.1	1326.3	1460.8	1546.4	1573.9
62.5°	1133.8	1201.0	1341.6	1427.2	1451.6
65°	999.3	1075.7	1213.3	1314.1	1338.5
67.5°	883.2	956.5	1103.2	1201.0	1225.5
70°	748.7	831.2	987.1	1088.0	1112.4
72.5°	632.6	718.2	874.0	971.8	1008.5
75°	507.3	605.1	761.0	864.9	889.3
77.5°	385.1	498.1	657.1	736.5	736.5
80°	275.0	394.2	540.9	577.6	583.7
82.5°	180.3	296.4	400.3	397.3	397.3
85°	103.9	192.5	238.4	232.3	232.3
87.5°	39.7	79.5	85.6	85.6	82.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)