

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: P389546

Luminaire Tested: **24CZ2-110VHE-S-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: P389546
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-L935-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9859.2 lumens
Efficiency: N/A
Efficacy: 127.4 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

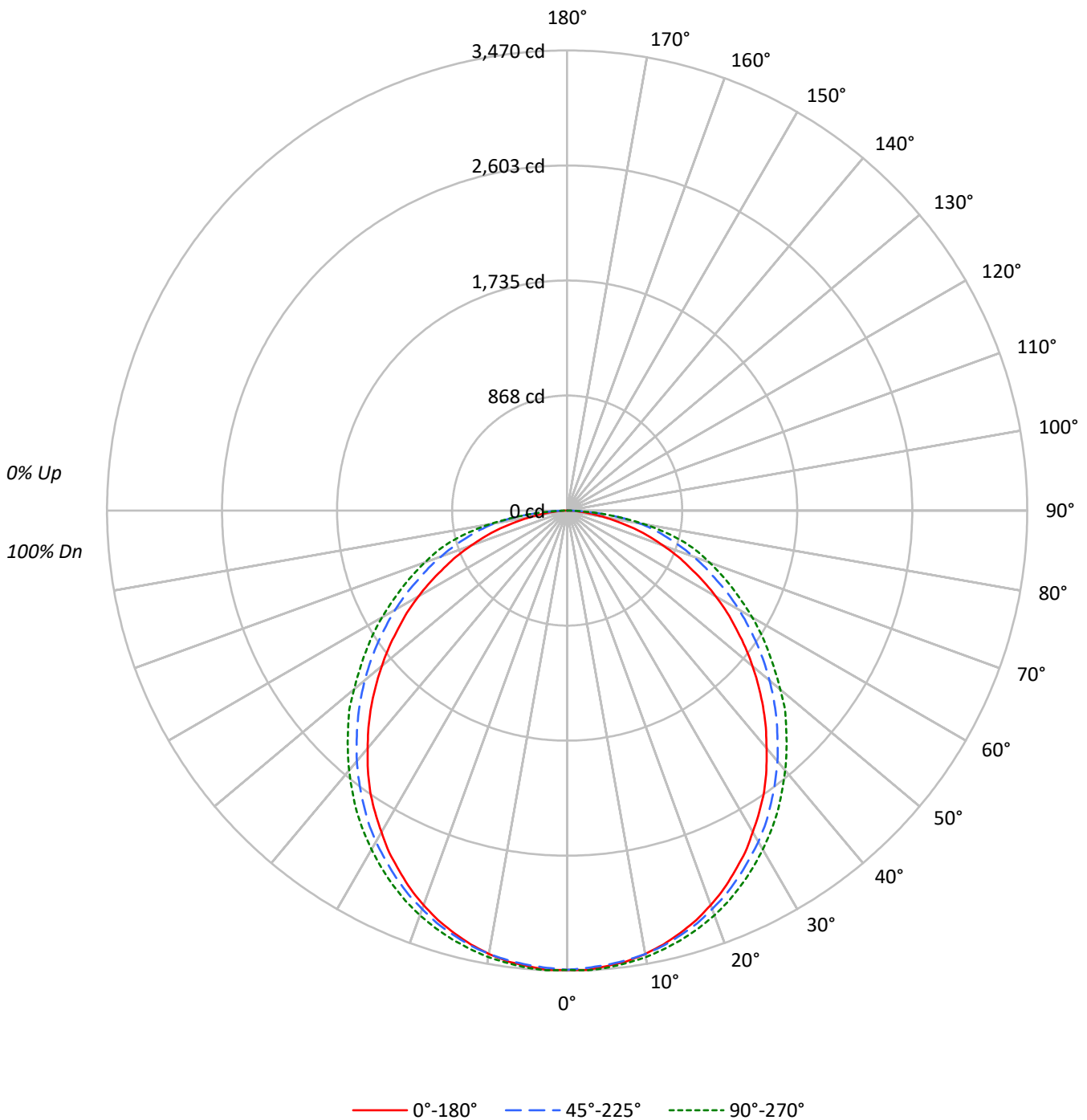
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4660	4660	4660
5°	4657	4644	4674
10°	4638	4638	4672
15°	4593	4615	4663
20°	4533	4578	4650
25°	4449	4533	4621
30°	4350	4481	4583
35°	4254	4408	4547
40°	4109	4334	4494
45°	3975	4249	4445
50°	3822	4169	4392
55°	3651	4092	4349
60°	3481	4028	4340
65°	3260	3958	4367
70°	3019	3979	4484
75°	2703	4054	4737
80°	2183	4295	4634
85°	1644	3771	3674



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	327.9	3.3
10°-20°	936.9	9.5
20°-30°	1408.4	14.3
30°-40°	1677.6	17.0
40°-50°	1717.0	17.4
50°-60°	1545.8	15.7
60°-70°	1213.9	12.3
70°-80°	787.9	8.0
80°-90°	243.7	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°	2673.2	27.1
0°-40°	4350.9	44.1
0°-60°	7613.7	77.2
0°-90°	9859.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9859.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3464	3464	3464	3464	3464	
5°	3448	3454	3438	3457	3460	328
15°	3298	3307	3313	3342	3348	930
25°	2997	3022	3053	3104	3113	1381
35°	2590	2621	2684	2750	2768	1616
45°	2089	2139	2233	2317	2336	1610
55°	1556	1625	1744	1835	1854	1395
65°	1024	1102	1243	1347	1372	1019
75°	520	620	780	886	911	550
85°	106	197	244	238	238	129
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3463.6	3463.6	3463.6	3463.6	3463.6
2.5°	3466.7	3466.7	3451.1	3466.7	3469.9
5°	3447.9	3454.2	3438.5	3457.3	3460.5
7.5°	3429.2	3429.2	3419.8	3438.5	3441.7
10°	3394.7	3397.8	3394.7	3416.6	3419.8
12.5°	3350.9	3357.1	3360.3	3382.2	3385.3
15°	3297.6	3307.0	3313.3	3341.5	3347.7
17.5°	3238.1	3247.5	3263.2	3294.5	3300.8
20°	3166.1	3178.6	3197.4	3238.1	3247.5
22.5°	3087.8	3100.3	3131.6	3169.2	3184.9
25°	2997.0	3022.0	3053.4	3103.5	3112.9
27.5°	2906.2	2928.1	2968.8	3022.0	3034.6
30°	2799.7	2834.1	2884.2	2937.5	2950.0
32.5°	2696.3	2730.8	2790.3	2846.7	2862.3
35°	2589.9	2621.2	2683.8	2749.6	2768.4
37.5°	2467.7	2508.4	2577.3	2643.1	2661.9
40°	2339.3	2389.4	2467.7	2536.6	2558.6
42.5°	2217.2	2270.4	2348.7	2423.9	2448.9
45°	2088.8	2138.9	2232.9	2317.4	2336.2
47.5°	1957.3	2013.6	2113.9	2198.4	2229.7
50°	1825.8	1885.3	1991.7	2079.4	2098.2
52.5°	1694.2	1756.9	1869.6	1963.5	1972.9
55°	1556.4	1625.3	1744.3	1835.1	1853.9
57.5°	1431.2	1490.7	1619.1	1713.0	1734.9
60°	1293.4	1359.1	1496.9	1584.6	1612.8
62.5°	1161.8	1230.7	1374.8	1462.5	1487.5
65°	1024.0	1102.3	1243.3	1346.6	1371.7
67.5°	905.0	980.2	1130.5	1230.7	1255.8
70°	767.3	851.8	1011.5	1114.9	1139.9
72.5°	648.3	735.9	895.7	995.9	1033.4
75°	519.9	620.1	779.8	886.3	911.3
77.5°	394.6	510.5	673.3	754.7	754.7
80°	281.8	404.0	554.3	591.9	598.1
82.5°	184.8	303.8	410.2	407.1	407.1
85°	106.5	197.3	244.3	238.0	238.0
87.5°	40.7	81.4	87.7	87.7	84.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)