

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: P389544

Luminaire Tested: **24CZ2-110VHE-S-UNV-L935-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: P389544
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-SDWPD1-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: 9619.4 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

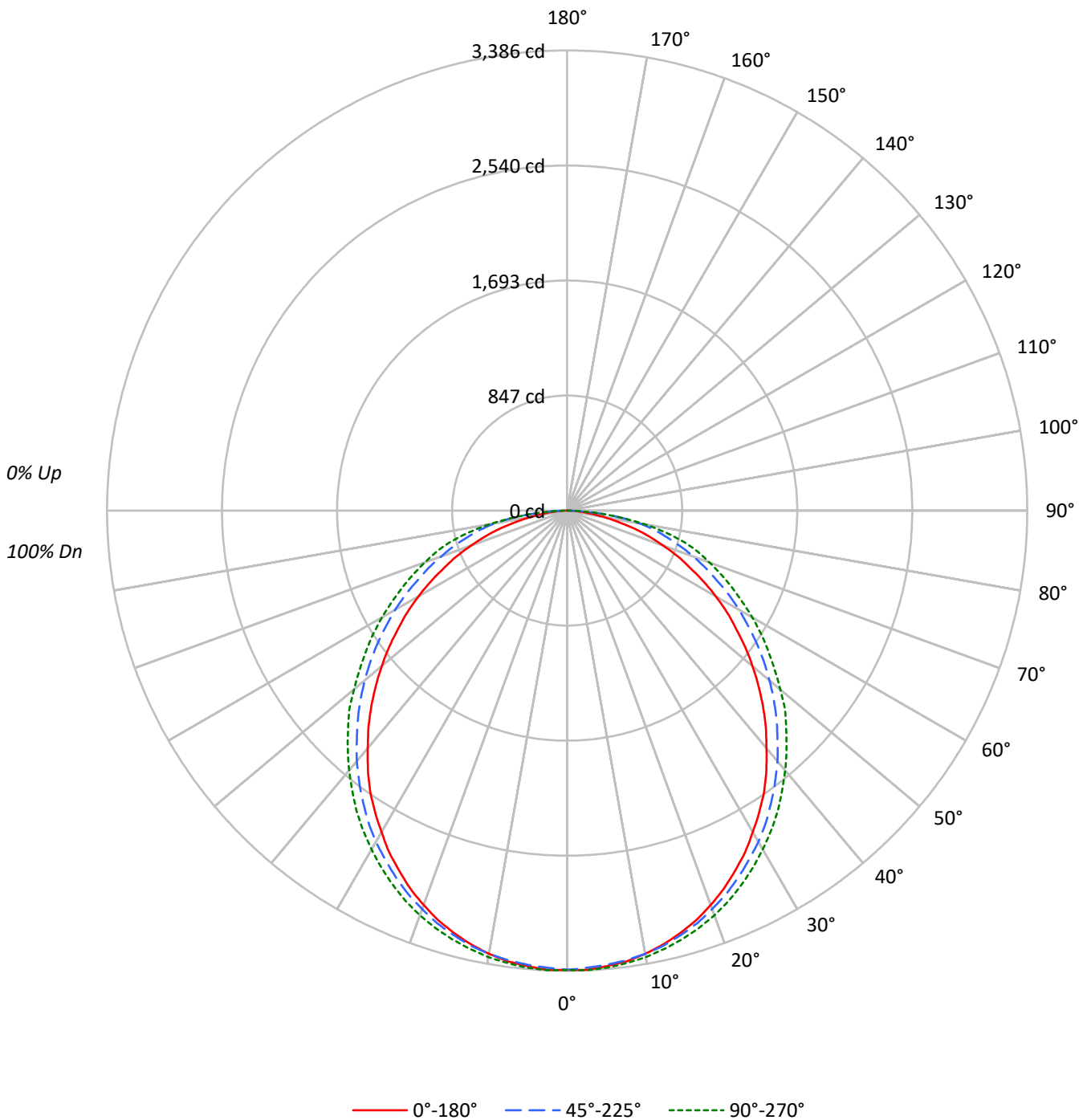
Input Watts (W): 77.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4547	4547	4547
5°	4544	4531	4560
10°	4525	4525	4559
15°	4482	4503	4550
20°	4423	4467	4537
25°	4341	4423	4509
30°	4244	4372	4472
35°	4151	4301	4436
40°	4009	4229	4385
45°	3878	4145	4337
50°	3729	4068	4285
55°	3562	3992	4243
60°	3396	3930	4235
65°	3181	3862	4261
70°	2945	3882	4375
75°	2637	3955	4622
80°	2131	4190	4522
85°	1604	3679	3585



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	319.9	3.3
10°-20°	914.1	9.5
20°-30°	1374.2	14.3
30°-40°	1636.8	17.0
40°-50°	1675.2	17.4
50°-60°	1508.2	15.7
60°-70°	1184.4	12.3
70°-80°	768.7	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°	2608.2	27.1
0°-40°	4245.1	44.1
0°-60°	7428.5	77.2
0°-90°	9619.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9619.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3379	3379	3379	3379	3379	
5°	3364	3370	3355	3373	3376	320
15°	3217	3227	3233	3260	3266	907
25°	2924	2948	2979	3028	3037	1347
35°	2527	2557	2618	2683	2701	1576
45°	2038	2087	2179	2261	2279	1571
55°	1519	1586	1702	1790	1809	1361
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°	3379.4	3379.4	3379.4	3379.4	3379.4
2.5°	3382.4	3382.4	3367.1	3382.4	3385.5
5°	3364.1	3370.2	3354.9	3373.2	3376.3
7.5°	3345.7	3345.7	3336.6	3354.9	3358.0
10°	3312.1	3315.2	3312.1	3333.5	3336.6
12.5°	3269.4	3275.5	3278.5	3299.9	3303.0
15°	3217.4	3226.6	3232.7	3260.2	3266.3
17.5°	3159.4	3168.5	3183.8	3214.4	3220.5
20°	3089.1	3101.3	3119.6	3159.4	3168.5
22.5°	3012.7	3024.9	3055.5	3092.1	3107.4
25°	2924.1	2948.5	2979.1	3028.0	3037.1
27.5°	2835.5	2856.9	2896.6	2948.5	2960.8
30°	2731.6	2765.2	2814.1	2866.0	2878.3
32.5°	2630.8	2664.4	2722.4	2777.4	2792.7
35°	2526.9	2557.4	2618.5	2682.7	2701.0
37.5°	2407.7	2447.4	2514.7	2578.8	2597.2
40°	2282.4	2331.3	2407.7	2474.9	2496.3
42.5°	2163.3	2215.2	2291.6	2364.9	2389.4
45°	2038.0	2086.9	2178.6	2261.1	2279.4
47.5°	1909.7	1964.7	2062.4	2144.9	2175.5
50°	1781.3	1839.4	1943.3	2028.8	2047.2
52.5°	1653.0	1714.1	1824.1	1915.8	1925.0
55°	1518.6	1585.8	1701.9	1790.5	1808.8
57.5°	1396.4	1454.4	1579.7	1671.3	1692.7
60°	1261.9	1326.1	1460.5	1546.1	1573.6
62.5°	1133.6	1200.8	1341.4	1426.9	1451.4
65°	999.1	1075.5	1213.0	1313.9	1338.3
67.5°	883.0	956.4	1103.0	1200.8	1225.2
70°	748.6	831.1	986.9	1087.7	1112.2
72.5°	632.5	718.0	873.9	971.6	1008.3
75°	507.2	605.0	760.8	864.7	889.1
77.5°	385.0	498.0	656.9	736.4	736.4
80°	275.0	394.2	540.8	577.5	583.6
82.5°	180.3	296.4	400.3	397.2	397.2
85°	103.9	192.5	238.3	232.2	232.2
87.5°	39.7	79.4	85.6	85.6	82.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)