

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: P389114

Luminaire Tested: **22CZ2-110VHE-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: P389114
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-110VHE-S-UNV-L935-CD2-U
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

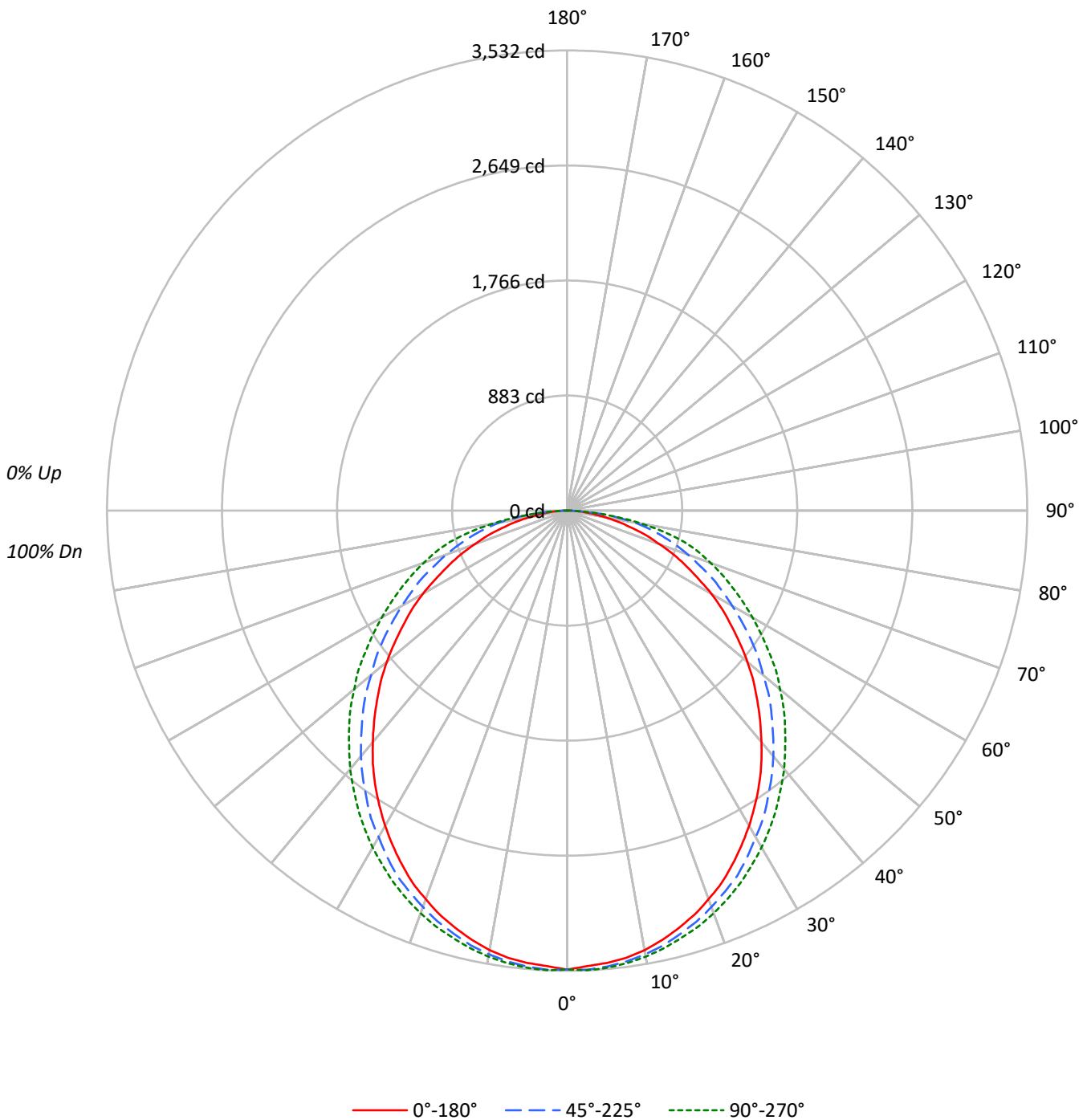
Lumens per Lamp: N/A
Luminaire Lumens: 9829.9 lumens
Efficiency: N/A
Efficacy: 112.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 87.7
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



TEST NUMBER: P389114
CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L935-CD2-U

Luminous Intensity Polar Plot





TEST NUMBER: P389114

CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L935-CD2-U

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	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9479	9479	9479
5°	9416	9490	9515
10°	9362	9449	9500
15°	9238	9366	9455
20°	9089	9273	9417
25°	8906	9178	9356
30°	8679	8992	9278
35°	8437	8829	9191
40°	8152	8652	9103
45°	7854	8448	9006
50°	7565	8218	8928
55°	7208	8069	8865
60°	6887	7874	8837
65°	6425	7827	8936
70°	5918	7759	9202
75°	5341	7869	9680
80°	4620	8103	9098
85°	3822	6796	6796



TEST NUMBER: P389114

CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L935-CD2-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.1	3.4
10°-20°	948.0	9.6
20°-30°	1418.4	14.4
30°-40°	1679.7	17.1
40°-50°	1711.8	17.4
50°-60°	1534.3	15.6
60°-70°	1201.2	12.2
70°-80°	774.6	7.9
80°-90°	228.8	2.3
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°	2699.4	27.5
0°-40°	4379.1	44.5
0°-60°	7625.3	77.6
0°-90°	9829.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9829.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3522	3522	3522	3522	3522	
5°	3486	3495	3513	3518	3522	331
15°	3316	3334	3362	3389	3394	935
25°	3000	3027	3091	3132	3151	1381
35°	2568	2600	2688	2770	2798	1605
45°	2064	2110	2220	2334	2367	1594
55°	1536	1587	1720	1839	1890	1378
65°	1009	1069	1229	1348	1403	1002
75°	514	592	757	885	931	551
85°	124	170	220	220	220	145
90°	0	0	0	0	0	



TEST NUMBER: P389114

CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L935-CD2-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3522.4	3522.4	3522.4	3522.4	3522.4
2.5°	3499.4	3508.6	3526.9	3531.5	3531.5
5°	3485.7	3494.8	3513.2	3517.8	3522.4
7.5°	3462.7	3467.3	3490.3	3499.4	3504.0
10°	3426.0	3435.2	3458.1	3471.9	3476.5
12.5°	3375.6	3389.4	3416.9	3435.2	3439.8
15°	3316.0	3334.3	3361.8	3389.4	3393.9
17.5°	3251.8	3270.1	3306.8	3338.9	3348.1
20°	3173.8	3196.7	3238.0	3274.7	3288.5
22.5°	3095.8	3114.2	3164.6	3210.5	3224.2
25°	2999.5	3027.0	3091.2	3132.5	3150.9
27.5°	2898.6	2930.7	2994.9	3050.0	3068.3
30°	2793.1	2825.2	2894.0	2962.8	2985.8
32.5°	2683.0	2719.7	2802.3	2871.1	2894.0
35°	2568.4	2600.5	2687.6	2770.2	2797.7
37.5°	2449.1	2476.7	2577.6	2664.7	2692.2
40°	2320.7	2357.4	2462.9	2563.8	2591.3
42.5°	2192.3	2233.6	2339.1	2449.1	2476.7
45°	2063.9	2109.7	2219.8	2334.5	2366.6
47.5°	1940.0	1976.7	2100.6	2210.6	2256.5
50°	1807.0	1843.7	1963.0	2086.8	2132.7
52.5°	1669.5	1719.9	1848.3	1967.6	2022.6
55°	1536.4	1586.9	1719.9	1839.1	1889.6
57.5°	1412.6	1453.9	1591.5	1715.3	1765.8
60°	1279.6	1316.3	1463.1	1596.1	1641.9
62.5°	1137.4	1192.5	1343.8	1467.6	1522.7
65°	1009.0	1068.6	1229.2	1348.4	1403.4
67.5°	889.8	944.8	1100.7	1229.2	1288.8
70°	752.2	825.6	986.1	1114.5	1169.5
72.5°	642.1	706.3	871.4	999.8	1059.5
75°	513.7	591.6	756.8	885.2	931.0
77.5°	408.2	486.2	642.1	743.0	765.9
80°	298.1	376.1	522.9	573.3	587.1
82.5°	201.8	275.2	376.1	389.8	394.4
85°	123.8	169.7	220.1	220.1	220.1
87.5°	59.6	68.8	78.0	73.4	73.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)