

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: P389111

Luminaire Tested: **22CZ2-110VHE-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: P389111
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-L930-CD2-U
Description: 2x2 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: 9592.6 lumens
Efficiency: N/A
Efficacy: 109.4 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

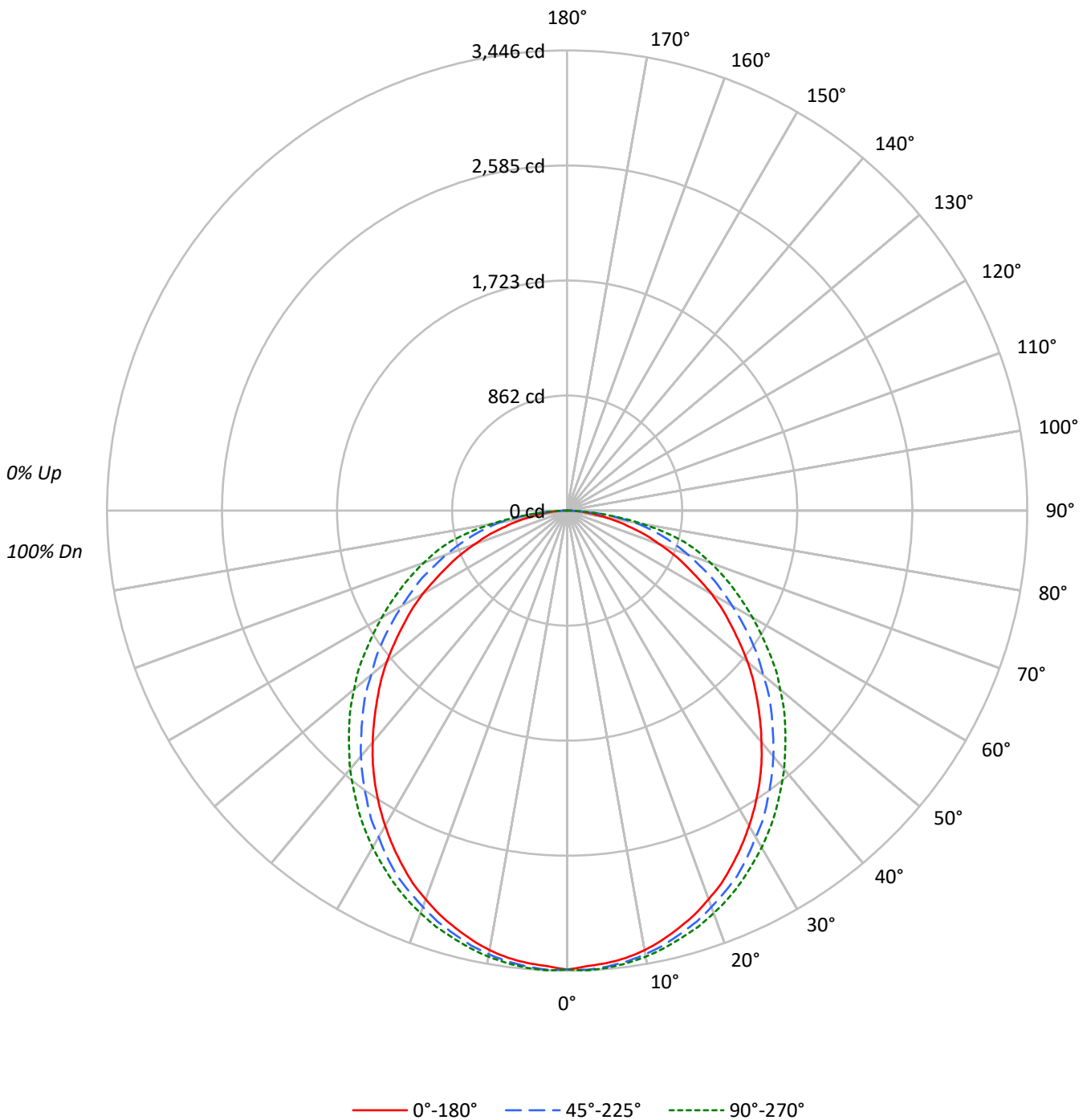
Input Watts (W): 87.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P389111

CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L930-CD2-U

Luminous Intensity Polar Plot





TEST NUMBER: P389111

CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L930-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°	9250	9250	9250
5°	9188	9261	9285
10°	9136	9221	9270
15°	9015	9140	9227
20°	8869	9049	9190
25°	8691	8957	9130
30°	8469	8776	9054
35°	8234	8616	8969
40°	7955	8443	8883
45°	7665	8244	8789
50°	7382	8020	8713
55°	7035	7874	8651
60°	6720	7684	8624
65°	6270	7638	8721
70°	5775	7571	8980
75°	5212	7678	9447
80°	4508	7906	8878
85°	3730	6632	6632



TEST NUMBER: P389111

CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L930-CD2-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	325.1	3.4
10°-20°	925.1	9.6
20°-30°	1384.1	14.4
30°-40°	1639.2	17.1
40°-50°	1670.5	17.4
50°-60°	1497.3	15.6
60°-70°	1172.2	12.2
70°-80°	755.9	7.9
80°-90°	223.3	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°	2634.3	27.5
0°-40°	4273.4	44.5
0°-60°	7441.2	77.6
0°-90°	9592.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9592.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3437	3437	3437	3437	3437	
5°	3402	3410	3428	3433	3437	323
15°	3236	3254	3281	3308	3312	912
25°	2927	2954	3017	3057	3075	1347
35°	2506	2538	2623	2703	2730	1566
45°	2014	2059	2166	2278	2310	1555
55°	1499	1549	1678	1795	1844	1344
65°	985	1043	1200	1316	1370	978
75°	501	577	738	864	909	537
85°	121	166	215	215	215	142
90°	0	0	0	0	0	



TEST NUMBER: P389111

CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L930-CD2-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3437.3	3437.3	3437.3	3437.3	3437.3
2.5°	3414.9	3423.9	3441.8	3446.3	3446.3
5°	3401.5	3410.5	3428.4	3432.9	3437.3
7.5°	3379.1	3383.6	3406.0	3414.9	3419.4
10°	3343.3	3352.3	3374.7	3388.1	3392.6
12.5°	3294.1	3307.5	3334.4	3352.3	3356.8
15°	3235.9	3253.8	3280.7	3307.5	3312.0
17.5°	3173.3	3191.2	3227.0	3258.3	3267.3
20°	3097.2	3119.6	3159.8	3195.6	3209.1
22.5°	3021.1	3039.0	3088.2	3133.0	3146.4
25°	2927.1	2954.0	3016.6	3056.9	3074.8
27.5°	2828.6	2860.0	2922.6	2976.3	2994.2
30°	2725.7	2757.0	2824.2	2891.3	2913.7
32.5°	2618.3	2654.1	2734.6	2801.8	2824.2
35°	2506.4	2537.7	2622.8	2703.3	2730.2
37.5°	2390.0	2416.9	2515.3	2600.4	2627.2
40°	2264.7	2300.5	2403.4	2501.9	2528.8
42.5°	2139.4	2179.7	2282.6	2390.0	2416.9
45°	2014.1	2058.8	2166.2	2278.1	2309.5
47.5°	1893.2	1929.0	2049.9	2157.3	2202.0
50°	1763.4	1799.2	1915.6	2036.4	2081.2
52.5°	1629.2	1678.4	1803.7	1920.1	1973.8
55°	1499.4	1548.6	1678.4	1794.8	1844.0
57.5°	1378.5	1418.8	1553.1	1673.9	1723.1
60°	1248.7	1284.5	1427.7	1557.5	1602.3
62.5°	1110.0	1163.7	1311.4	1432.2	1485.9
65°	984.7	1042.8	1199.5	1315.9	1369.6
67.5°	868.3	922.0	1074.2	1199.5	1257.7
70°	734.0	805.6	962.3	1087.6	1141.3
72.5°	626.6	689.3	850.4	975.7	1033.9
75°	501.3	577.4	738.5	863.8	908.6
77.5°	398.3	474.4	626.6	725.1	747.4
80°	290.9	367.0	510.2	559.5	572.9
82.5°	196.9	268.5	367.0	380.4	384.9
85°	120.8	165.6	214.8	214.8	214.8
87.5°	58.2	67.1	76.1	71.6	71.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)