

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: P389113

Luminaire Tested: **22CZ2-110VHE-S-UNV-L935-CD2-SWPD1-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: P389113
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-SWPD1-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: 9707.9 lumens
Efficiency: N/A
Efficacy: 110.7 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

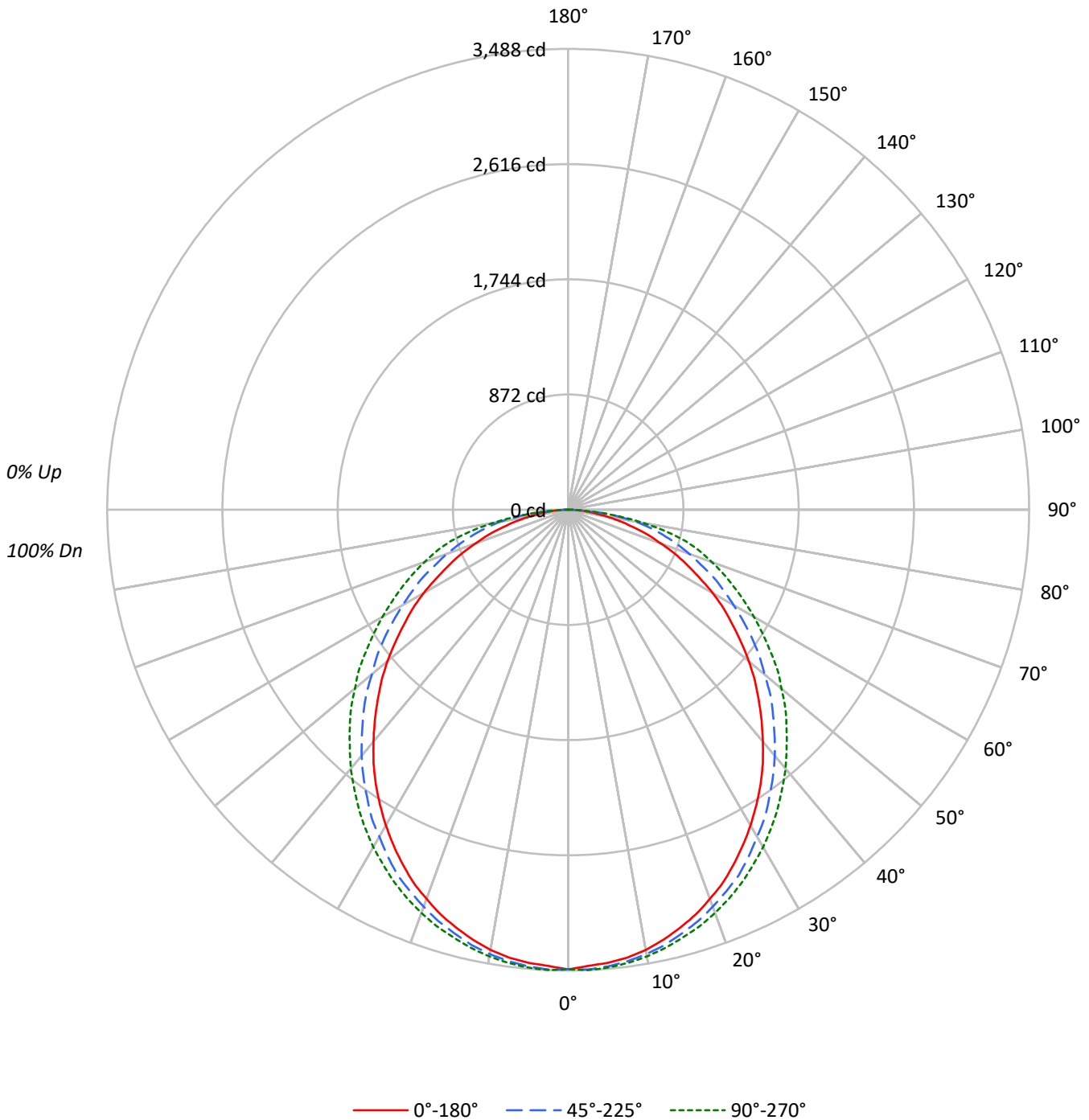
Input Watts (W): 87.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	9361	9361	9361
5°	9299	9372	9397
10°	9245	9332	9381
15°	9123	9249	9338
20°	8976	9157	9300
25°	8796	9065	9239
30°	8571	8881	9162
35°	8333	8720	9077
40°	8051	8544	8990
45°	7757	8343	8894
50°	7471	8116	8817
55°	7119	7969	8755
60°	6801	7776	8727
65°	6345	7729	8825
70°	5844	7662	9087
75°	5274	7771	9560
80°	4562	8003	8985
85°	3776	6712	6712



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	329.0	3.4
10°-20°	936.2	9.6
20°-30°	1400.8	14.4
30°-40°	1658.9	17.1
40°-50°	1690.6	17.4
50°-60°	1515.2	15.6
60°-70°	1186.3	12.2
70°-80°	765.0	7.9
80°-90°	226.0	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°	2665.9	27.5
0°-40°	4324.8	44.5
0°-60°	7530.6	77.6
0°-90°	9707.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9707.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3479	3479	3479	3479	3479	
5°	3442	3452	3470	3474	3479	327
15°	3275	3293	3320	3347	3352	923
25°	2962	2990	3053	3094	3112	1364
35°	2536	2568	2654	2736	2763	1585
45°	2038	2084	2192	2306	2337	1574
55°	1517	1567	1699	1816	1866	1360
65°	996	1055	1214	1332	1386	990
75°	507	584	747	874	920	544
85°	122	168	217	217	217	144
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3478.6	3478.6	3478.6	3478.6	3478.6
2.5°	3456.0	3465.1	3483.2	3487.7	3487.7
5°	3442.4	3451.5	3469.6	3474.1	3478.6
7.5°	3419.8	3424.3	3446.9	3456.0	3460.5
10°	3383.5	3392.6	3415.2	3428.8	3433.3
12.5°	3333.7	3347.3	3374.5	3392.6	3397.1
15°	3274.8	3292.9	3320.1	3347.3	3351.8
17.5°	3211.4	3229.5	3265.8	3297.5	3306.5
20°	3134.4	3157.0	3197.8	3234.1	3247.6
22.5°	3057.4	3075.5	3125.3	3170.6	3184.2
25°	2962.3	2989.5	3052.9	3093.6	3111.8
27.5°	2862.6	2894.3	2957.8	3012.1	3030.2
30°	2758.5	2790.2	2858.1	2926.0	2948.7
32.5°	2649.7	2686.0	2767.5	2835.5	2858.1
35°	2536.5	2568.2	2654.3	2735.8	2763.0
37.5°	2418.7	2445.9	2545.6	2631.6	2658.8
40°	2291.9	2328.2	2432.3	2532.0	2559.2
42.5°	2165.1	2205.9	2310.0	2418.7	2445.9
45°	2038.3	2083.6	2192.3	2305.5	2337.2
47.5°	1916.0	1952.2	2074.5	2183.2	2228.5
50°	1784.6	1820.9	1938.6	2060.9	2106.2
52.5°	1648.7	1698.6	1825.4	1943.1	1997.5
55°	1517.4	1567.2	1698.6	1816.3	1866.1
57.5°	1395.1	1435.8	1571.7	1694.0	1743.9
60°	1263.7	1300.0	1444.9	1576.3	1621.6
62.5°	1123.3	1177.7	1327.1	1449.4	1503.8
65°	996.5	1055.4	1213.9	1331.7	1386.0
67.5°	878.7	933.1	1087.1	1213.9	1272.8
70°	742.8	815.3	973.8	1100.7	1155.0
72.5°	634.1	697.5	860.6	987.4	1046.3
75°	507.3	584.3	747.4	874.2	919.5
77.5°	403.1	480.1	634.1	733.8	756.4
80°	294.4	371.4	516.4	566.2	579.8
82.5°	199.3	271.8	371.4	385.0	389.5
85°	122.3	167.6	217.4	217.4	217.4
87.5°	58.9	67.9	77.0	72.5	72.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)