

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: P388183

Luminaire Tested: **22CZ2-110VHE-UNV-L950-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: P388183  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-110VHE-UNV-L950-CD2-SWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9908.2 lumens  
Efficiency: N/A  
Efficacy: 113.0 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

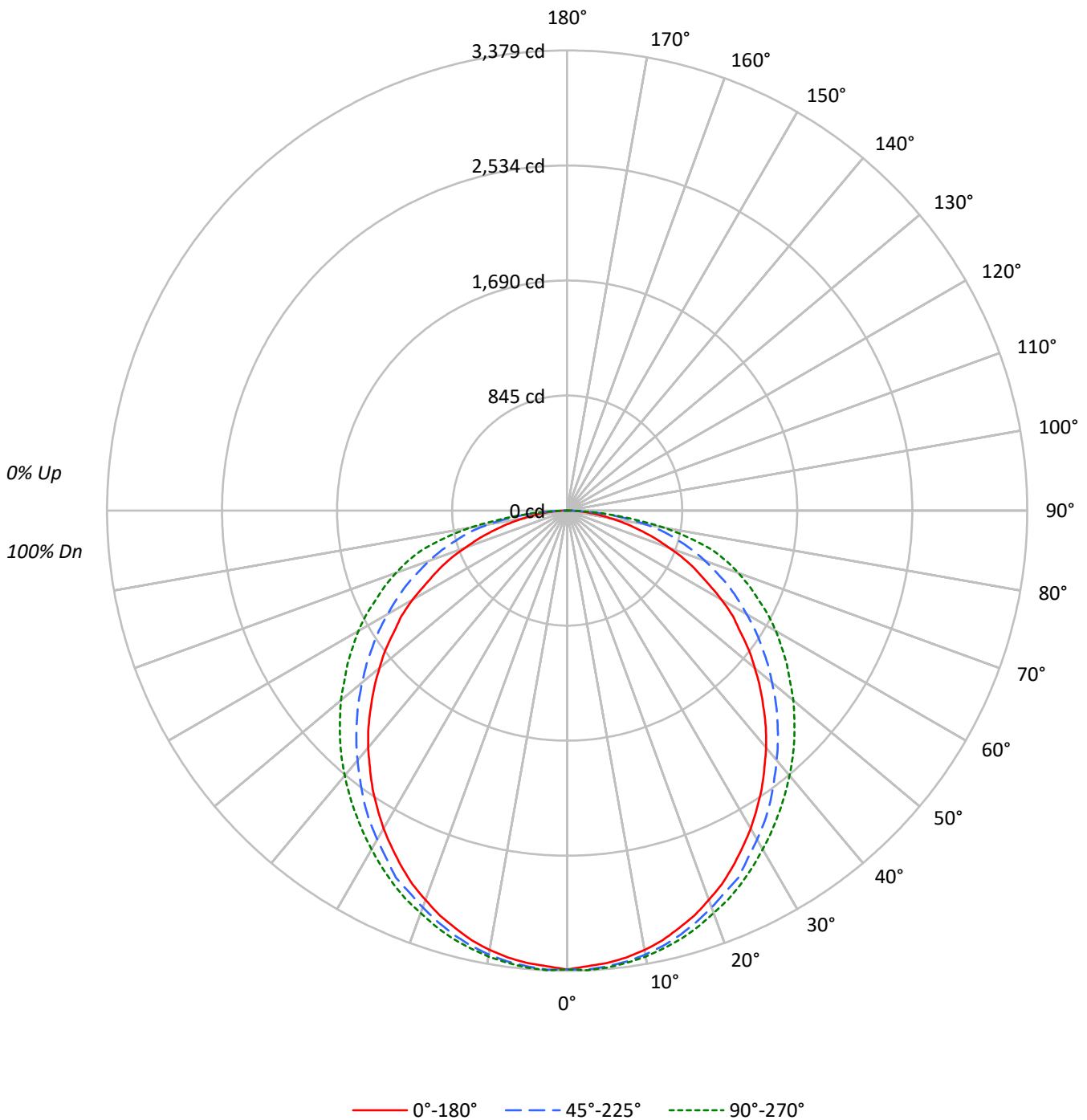
Input Watts (W): 87.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	9066	9066	9066
5°	9008	9074	9101
10°	8952	9046	9086
15°	8842	8978	9060
20°	8712	8880	9005
25°	8555	8831	8975
30°	8378	8666	8923
35°	8184	8553	8905
40°	7981	8409	8923
45°	7756	8312	8980
50°	7532	8225	9083
55°	7274	8189	9241
60°	7058	8187	9525
65°	6706	8320	9872
70°	6253	8478	10511
75°	5728	8770	11355
80°	4987	9142	11182
85°	4366	8130	8883



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	318.6	3.2
10°-20°	907.5	9.2
20°-30°	1362.4	13.7
30°-40°	1627.9	16.4
40°-50°	1692.8	17.1
50°-60°	1568.9	15.8
60°-70°	1286.9	13.0
70°-80°	869.9	8.8
80°-90°	273.4	2.8
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°	2588.5	26.1
0°-40°	4216.3	42.6
0°-60°	7478.0	75.5
0°-90°	9908.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9908.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3369	3369	3369	3369	3369	
5°	3335	3340	3359	3364	3369	317
15°	3174	3189	3223	3242	3252	895
25°	2881	2906	2974	3008	3023	1327
35°	2491	2526	2604	2682	2711	1557
45°	2038	2077	2184	2311	2360	1574
55°	1550	1599	1745	1901	1970	1393
65°	1053	1112	1307	1477	1550	1041
75°	551	644	844	1014	1092	584
85°	141	195	263	292	288	161
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3369.0	3369.0	3369.0	3369.0	3369.0
2.5°	3349.5	3359.2	3373.8	3378.7	3378.7
5°	3334.8	3339.7	3359.2	3364.1	3369.0
7.5°	3310.5	3320.2	3339.7	3344.6	3349.5
10°	3276.3	3286.1	3310.5	3320.2	3325.1
12.5°	3232.5	3242.2	3271.5	3286.1	3291.0
15°	3174.0	3188.6	3222.7	3242.2	3252.0
17.5°	3115.4	3130.1	3164.2	3193.5	3203.2
20°	3042.3	3076.4	3100.8	3139.8	3144.7
22.5°	2969.2	2988.7	3032.6	3071.6	3091.1
25°	2881.4	2905.8	2974.1	3008.2	3022.8
27.5°	2788.8	2822.9	2876.5	2930.2	2949.7
30°	2696.2	2720.5	2788.8	2852.2	2871.7
32.5°	2593.8	2627.9	2701.0	2764.4	2793.7
35°	2491.4	2525.5	2603.5	2681.5	2710.8
37.5°	2379.2	2418.2	2496.3	2588.9	2627.9
40°	2272.0	2301.2	2393.9	2506.0	2540.1
42.5°	2159.8	2194.0	2291.5	2413.4	2452.4
45°	2038.0	2077.0	2184.2	2311.0	2359.7
47.5°	1920.9	1960.0	2077.0	2203.7	2262.2
50°	1799.1	1847.8	1964.8	2111.1	2169.6
52.5°	1682.0	1725.9	1857.6	2008.7	2062.3
55°	1550.4	1599.2	1745.4	1901.4	1969.7
57.5°	1443.1	1477.3	1638.2	1799.1	1867.3
60°	1311.5	1355.4	1521.2	1691.8	1769.8
62.5°	1170.1	1243.3	1413.9	1589.4	1667.4
65°	1053.1	1111.6	1306.6	1477.3	1550.4
67.5°	931.2	994.6	1184.7	1365.1	1448.0
70°	794.7	877.6	1077.5	1257.9	1335.9
72.5°	672.8	760.6	965.3	1140.9	1223.8
75°	550.9	643.6	843.5	1014.1	1092.1
77.5°	433.9	536.3	731.3	863.0	911.7
80°	321.8	419.3	589.9	682.6	721.6
82.5°	224.3	307.2	433.9	482.7	492.4
85°	141.4	195.0	263.3	292.5	287.7
87.5°	63.4	78.0	97.5	107.3	102.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)