

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: P387629

Luminaire Tested: **22CZ2-110VHE-SQR-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: P387629  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-110VHE-SQR-UNV-L935-CD2-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8984.6 lumens  
Efficiency: N/A  
Efficacy: 102.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

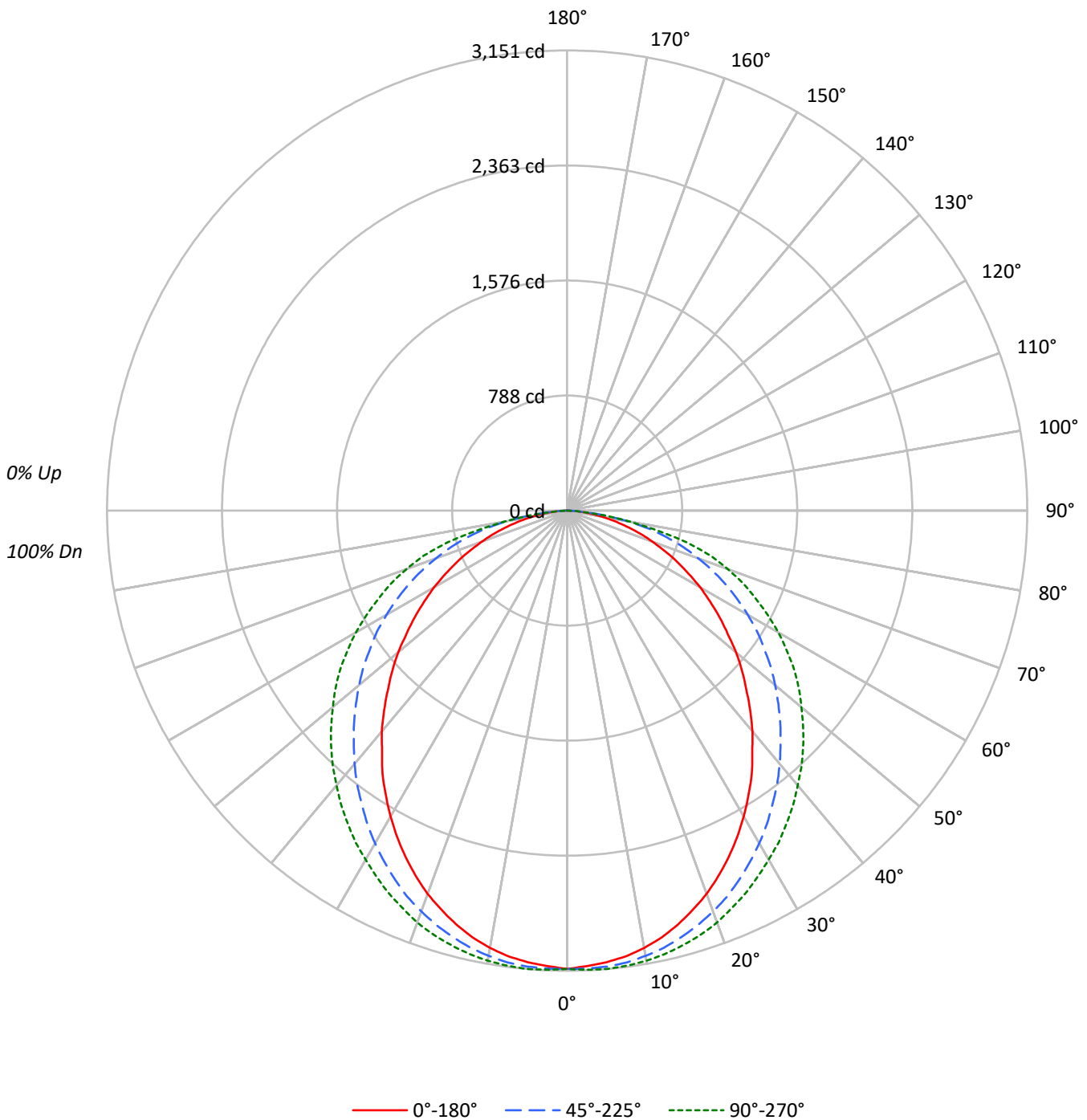
Input Watts (W): 87.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	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	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	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°	8446	8446	8446
5°	8386	8467	8512
10°	8308	8460	8553
15°	8174	8423	8577
20°	7999	8365	8597
25°	7774	8281	8584
30°	7513	8176	8573
35°	7243	8055	8601
40°	6936	7954	8628
45°	6605	7854	8699
50°	6320	7783	8766
55°	5982	7722	8903
60°	5669	7688	8996
65°	5294	7630	9069
70°	4865	7515	9193
75°	4390	7315	8868
80°	3767	6476	6674
85°	3029	3819	3029



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	297.5	3.3
10°-20°	850.7	9.5
20°-30°	1277.7	14.2
30°-40°	1523.8	17.0
40°-50°	1575.5	17.5
50°-60°	1448.5	16.1
60°-70°	1153.2	12.8
70°-80°	704.5	7.8
80°-90°	153.1	1.7
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°	2425.9	27.0
0°-40°	3949.8	44.0
0°-60°	6973.8	77.6
0°-90°	8984.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8984.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3138	3138	3138	3138	3138	
5°	3104	3113	3134	3147	3151	294
15°	2934	2968	3023	3066	3079	826
25°	2618	2682	2789	2866	2891	1204
35°	2205	2298	2452	2580	2618	1375
45°	1736	1859	2064	2230	2286	1342
55°	1275	1416	1646	1834	1898	1140
65°	832	972	1198	1365	1424	824
75°	422	546	704	827	853	450
85°	98	119	124	107	98	113
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3138.5	3138.5	3138.5	3138.5	3138.5
2.5°	3121.5	3125.7	3138.5	3147.1	3147.1
5°	3104.4	3113.0	3134.3	3147.1	3151.3
7.5°	3078.8	3091.6	3121.5	3138.5	3142.8
10°	3040.5	3057.5	3095.9	3121.5	3130.0
12.5°	2993.6	3019.1	3066.0	3100.2	3108.7
15°	2933.9	2968.0	3023.4	3066.0	3078.8
17.5°	2865.6	2908.3	2976.5	3027.7	3044.7
20°	2793.1	2835.8	2921.1	2980.8	3002.1
22.5°	2707.8	2763.3	2861.4	2929.6	2946.6
25°	2618.3	2682.3	2788.9	2865.6	2891.2
27.5°	2520.2	2597.0	2712.1	2805.9	2827.2
30°	2417.9	2498.9	2631.1	2733.4	2759.0
32.5°	2311.3	2405.1	2545.8	2660.9	2695.0
35°	2204.7	2298.5	2452.0	2579.9	2618.3
37.5°	2081.0	2191.9	2362.4	2494.6	2541.5
40°	1974.4	2081.0	2264.4	2409.3	2456.2
42.5°	1855.0	1970.1	2162.0	2319.8	2375.2
45°	1735.6	1859.2	2063.9	2230.2	2285.7
47.5°	1624.7	1748.4	1961.6	2136.4	2191.9
50°	1509.6	1637.5	1859.2	2038.3	2093.8
52.5°	1385.9	1526.6	1756.9	1936.0	2000.0
55°	1275.0	1415.8	1646.0	1833.7	1897.6
57.5°	1159.9	1304.9	1543.7	1722.8	1782.5
60°	1053.3	1194.0	1428.5	1603.4	1671.6
62.5°	938.1	1083.1	1313.4	1484.0	1547.9
65°	831.5	972.3	1198.3	1364.6	1424.3
67.5°	724.9	865.7	1078.9	1236.7	1304.9
70°	618.3	759.0	955.2	1108.7	1168.4
72.5°	524.5	648.2	835.8	976.5	1032.0
75°	422.2	545.8	703.6	827.3	852.9
77.5°	328.4	439.2	571.4	626.9	635.4
80°	243.1	328.4	417.9	430.7	430.7
82.5°	162.0	226.0	260.1	264.4	260.1
85°	98.1	119.4	123.7	106.6	98.1
87.5°	34.1	34.1	21.3	12.8	4.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)