

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: P387624

Luminaire Tested: **22CZ2-110VHE-SQR-UNV-L930-CD2-SDWPD1-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: P387624  
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-L930-CD2-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8554.5 lumens  
Efficiency: N/A  
Efficacy: 97.5 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

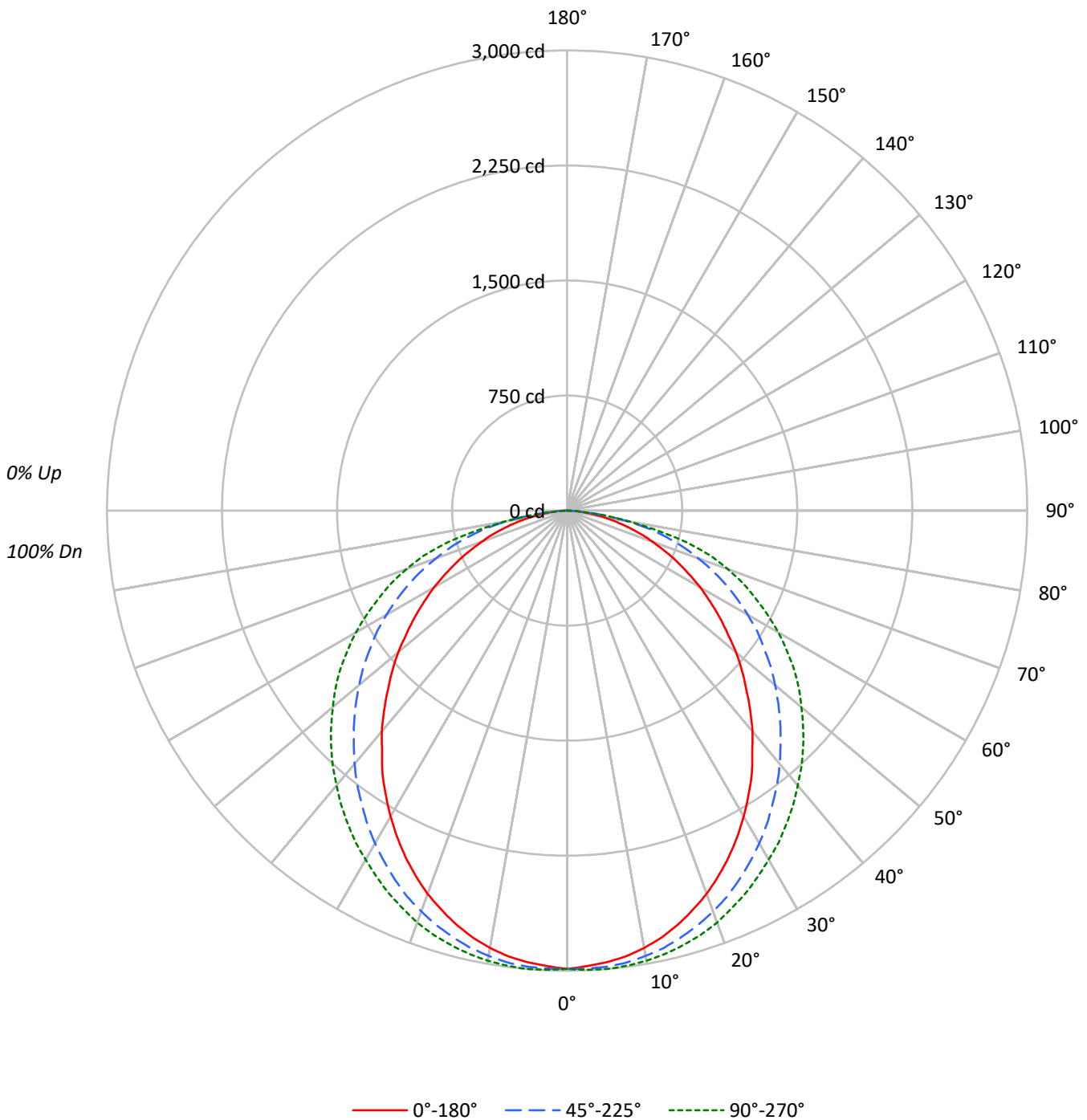
Input Watts (W): 87.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83					83			
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43					43			
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

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

	0°	45°	90°
0°	8041	8041	8041
5°	7984	8061	8105
10°	7910	8055	8143
15°	7782	8020	8167
20°	7616	7964	8186
25°	7402	7884	8174
30°	7153	7784	8162
35°	6896	7669	8190
40°	6604	7574	8215
45°	6289	7478	8282
50°	6017	7411	8346
55°	5696	7353	8477
60°	5398	7321	8566
65°	5041	7265	8635
70°	4632	7156	8753
75°	4180	6965	8442
80°	3586	6166	6355
85°	2884	3634	2884



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	283.3	3.3
10°-20°	810.0	9.5
20°-30°	1216.5	14.2
30°-40°	1450.9	17.0
40°-50°	1500.1	17.5
50°-60°	1379.2	16.1
60°-70°	1097.9	12.8
70°-80°	670.8	7.8
80°-90°	145.8	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°	2309.8	27.0
0°-40°	3760.7	44.0
0°-60°	6640.0	77.6
0°-90°	8554.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8554.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2988	2988	2988	2988	2988	
5°	2956	2964	2984	2996	3000	280
15°	2793	2826	2879	2919	2932	787
25°	2493	2554	2655	2728	2753	1147
35°	2099	2188	2335	2456	2493	1310
45°	1652	1770	1965	2124	2176	1278
55°	1214	1348	1567	1746	1807	1086
65°	792	926	1141	1299	1356	784
75°	402	520	670	788	812	428
85°	93	114	118	102	93	108
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2988.3	2988.3	2988.3	2988.3	2988.3
2.5°	2972.1	2976.1	2988.3	2996.4	2996.4
5°	2955.8	2963.9	2984.2	2996.4	3000.5
7.5°	2931.5	2943.6	2972.1	2988.3	2992.4
10°	2894.9	2911.1	2947.7	2972.1	2980.2
12.5°	2850.2	2874.6	2919.3	2951.8	2959.9
15°	2793.4	2825.9	2878.7	2919.3	2931.5
17.5°	2728.4	2769.0	2834.0	2882.7	2899.0
20°	2659.4	2700.0	2781.2	2838.1	2858.4
22.5°	2578.2	2631.0	2724.4	2789.3	2805.6
25°	2493.0	2553.9	2655.4	2728.4	2752.8
27.5°	2399.6	2472.6	2582.3	2671.6	2691.9
30°	2302.1	2379.3	2505.1	2602.6	2626.9
32.5°	2200.6	2289.9	2423.9	2533.6	2566.0
35°	2099.1	2188.4	2334.6	2456.4	2493.0
37.5°	1981.4	2086.9	2249.3	2375.2	2419.9
40°	1879.9	1981.4	2156.0	2294.0	2338.7
42.5°	1766.2	1875.8	2058.5	2208.7	2261.5
45°	1652.5	1770.2	1965.1	2123.5	2176.3
47.5°	1546.9	1664.7	1867.7	2034.2	2086.9
50°	1437.3	1559.1	1770.2	1940.8	1993.5
52.5°	1319.6	1453.5	1672.8	1843.3	1904.2
55°	1214.0	1348.0	1567.2	1745.9	1806.8
57.5°	1104.4	1242.4	1469.8	1640.3	1697.2
60°	1002.9	1136.9	1360.2	1526.6	1591.6
62.5°	893.2	1031.3	1250.5	1412.9	1473.8
65°	791.7	925.7	1140.9	1299.3	1356.1
67.5°	690.2	824.2	1027.2	1177.5	1242.4
70°	588.7	722.7	909.5	1055.6	1112.5
72.5°	499.4	617.1	795.8	929.8	982.6
75°	402.0	519.7	669.9	787.7	812.0
77.5°	312.6	418.2	544.1	596.8	605.0
80°	231.4	312.6	397.9	410.1	410.1
82.5°	154.3	215.2	247.7	251.7	247.7
85°	93.4	113.7	117.7	101.5	93.4
87.5°	32.5	32.5	20.3	12.2	4.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)