

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: P389474

Luminaire Tested: **22CZ2-90VHE-S-UNV-L935-CD1-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: P389474  
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: 22CZ2-90VHE-S-UNV-L935-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

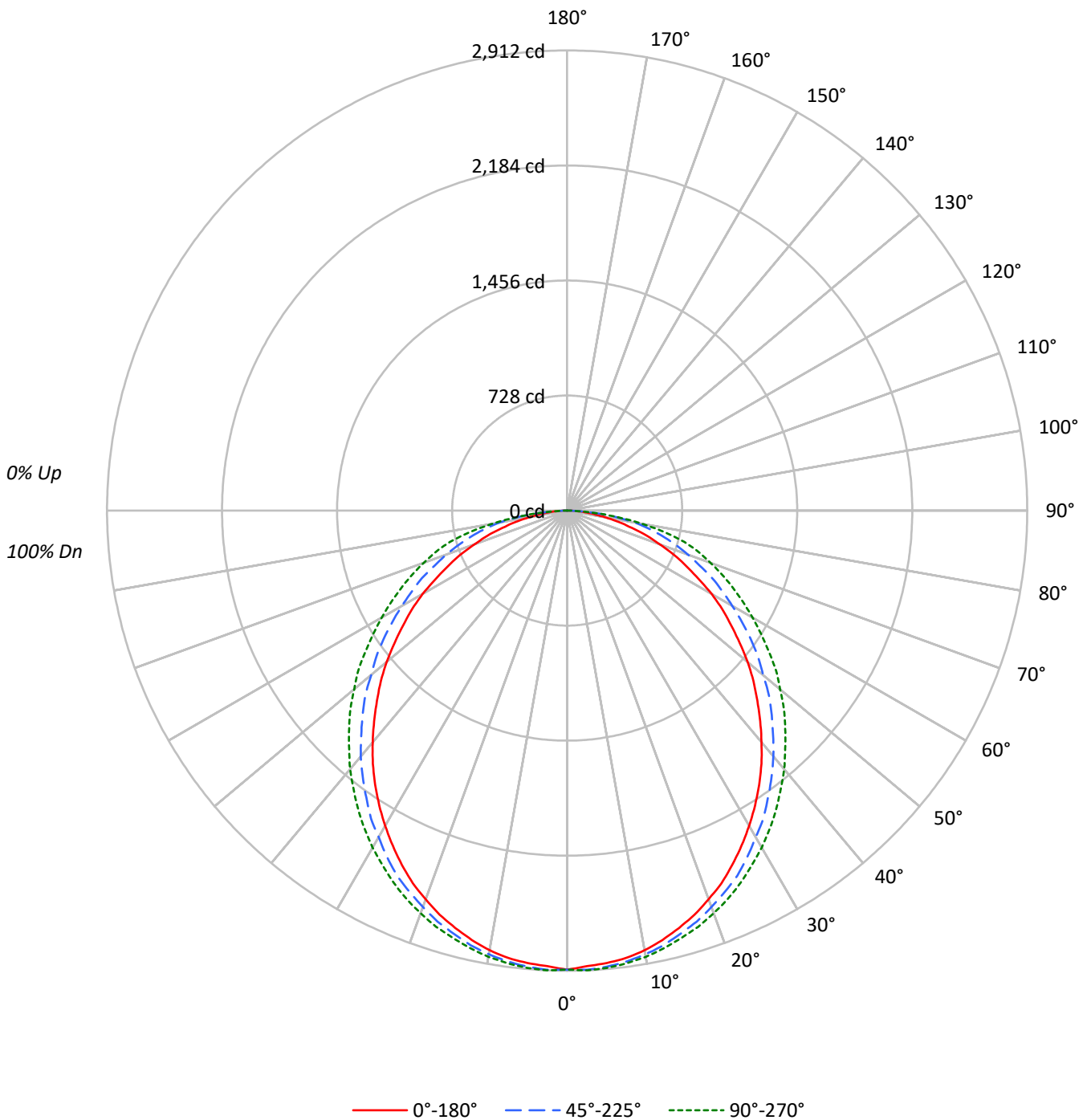
Lumens per Lamp: N/A  
Luminaire Lumens: 8106.4 lumens  
Efficiency: N/A  
Efficacy: 118.9 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
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°	7817	7817	7817
5°	7765	7826	7847
10°	7720	7793	7834
15°	7618	7724	7797
20°	7495	7647	7766
25°	7345	7569	7715
30°	7157	7416	7651
35°	6958	7281	7579
40°	6723	7135	7507
45°	6477	6967	7427
50°	6239	6777	7363
55°	5945	6654	7311
60°	5680	6493	7287
65°	5298	6454	7370
70°	4880	6398	7589
75°	4404	6489	7983
80°	3809	6682	7502
85°	3152	5604	5604



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	274.7	3.4
10°-20°	781.7	9.6
20°-30°	1169.7	14.4
30°-40°	1385.2	17.1
40°-50°	1411.7	17.4
50°-60°	1265.3	15.6
60°-70°	990.6	12.2
70°-80°	638.8	7.9
80°-90°	188.7	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°	2226.1	27.5
0°-40°	3611.3	44.5
0°-60°	6288.3	77.6
0°-90°	8106.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8106.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2905	2905	2905	2905	2905	
5°	2874	2882	2897	2901	2905	273
15°	2735	2750	2772	2795	2799	771
25°	2474	2496	2549	2583	2598	1139
35°	2118	2144	2216	2284	2307	1324
45°	1702	1740	1831	1925	1952	1314
55°	1267	1309	1418	1517	1558	1136
65°	832	881	1014	1112	1157	827
75°	424	488	624	730	768	454
85°	102	140	182	182	182	120
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2904.8	2904.8	2904.8	2904.8	2904.8
2.5°	2885.9	2893.4	2908.6	2912.3	2912.3
5°	2874.5	2882.1	2897.2	2901.0	2904.8
7.5°	2855.6	2859.4	2878.3	2885.9	2889.6
10°	2825.3	2832.9	2851.8	2863.2	2867.0
12.5°	2783.7	2795.1	2817.8	2832.9	2836.7
15°	2734.6	2749.7	2772.4	2795.1	2798.9
17.5°	2681.6	2696.8	2727.0	2753.5	2761.0
20°	2617.3	2636.2	2670.3	2700.5	2711.9
22.5°	2553.0	2568.2	2609.8	2647.6	2658.9
25°	2473.6	2496.3	2549.2	2583.3	2598.4
27.5°	2390.4	2416.9	2469.8	2515.2	2530.3
30°	2303.4	2329.9	2386.6	2443.3	2462.3
32.5°	2212.6	2242.9	2311.0	2367.7	2386.6
35°	2118.1	2144.5	2216.4	2284.5	2307.2
37.5°	2019.7	2042.4	2125.6	2197.5	2220.2
40°	1913.8	1944.1	2031.1	2114.3	2137.0
42.5°	1807.9	1842.0	1929.0	2019.7	2042.4
45°	1702.0	1739.8	1830.6	1925.2	1951.6
47.5°	1599.9	1630.2	1732.3	1823.0	1860.9
50°	1490.2	1520.5	1618.8	1720.9	1758.8
52.5°	1376.7	1418.3	1524.3	1622.6	1668.0
55°	1267.1	1308.7	1418.3	1516.7	1558.3
57.5°	1164.9	1199.0	1312.4	1414.6	1456.2
60°	1055.3	1085.5	1206.5	1316.2	1354.0
62.5°	938.0	983.4	1108.2	1210.3	1255.7
65°	832.1	881.3	1013.6	1112.0	1157.4
67.5°	733.8	779.1	907.7	1013.6	1062.8
70°	620.3	680.8	813.2	919.1	964.5
72.5°	529.5	582.5	718.6	824.5	873.7
75°	423.6	487.9	624.1	730.0	767.8
77.5°	336.6	400.9	529.5	612.7	631.6
80°	245.8	310.1	431.2	472.8	484.1
82.5°	166.4	226.9	310.1	321.5	325.3
85°	102.1	139.9	181.5	181.5	181.5
87.5°	49.2	56.7	64.3	60.5	60.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)