

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: P389472

Luminaire Tested: **22CZ2-90VHE-S-UNV-L935-CD1-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: P389472  
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-SDWPD1-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: 7909.3 lumens  
Efficiency: N/A  
Efficacy: 116.0 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

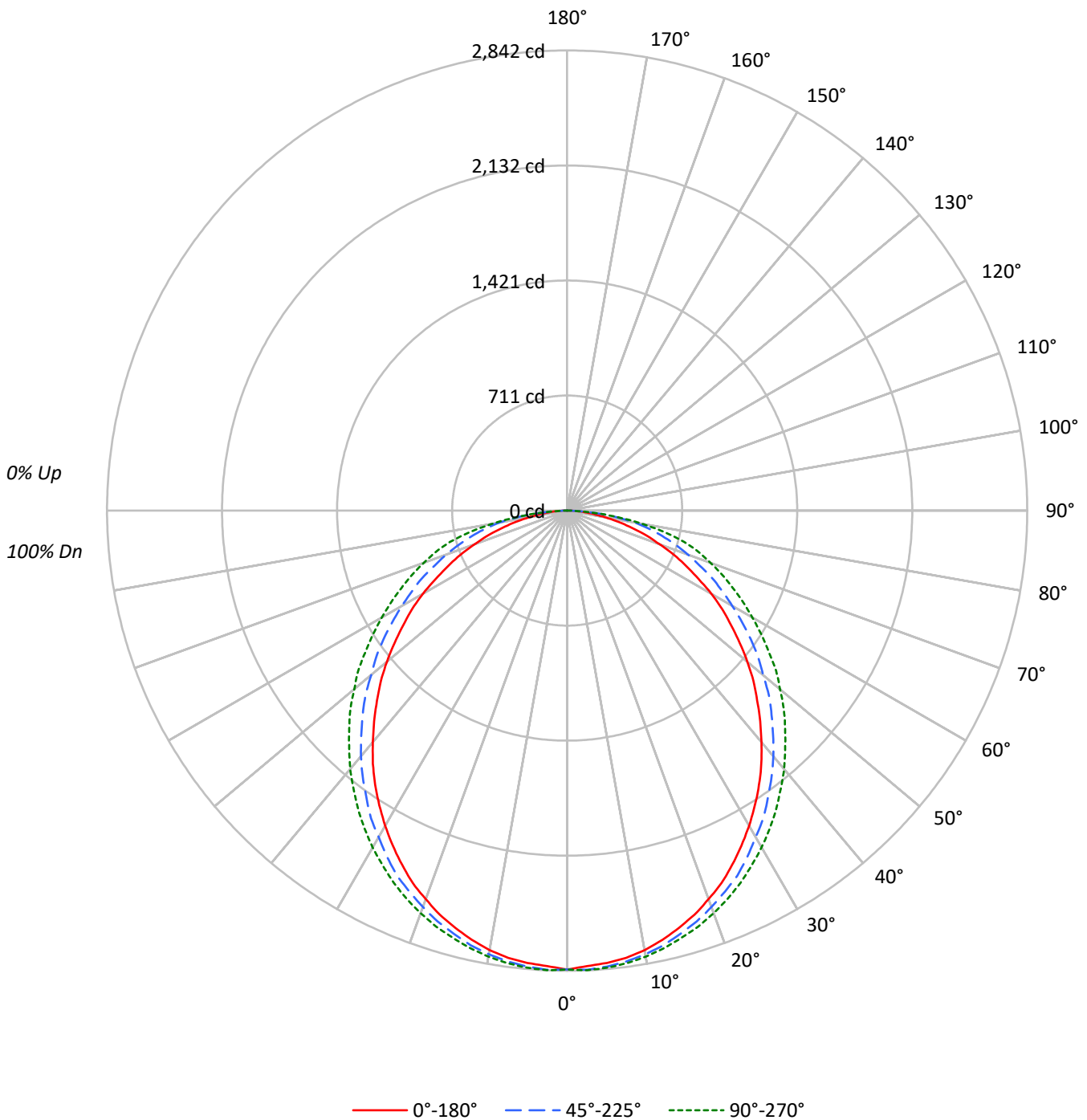
Input Watts (W): 68.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	7627	7627	7627
5°	7576	7636	7656
10°	7533	7603	7643
15°	7433	7536	7608
20°	7313	7461	7577
25°	7166	7385	7527
30°	6983	7236	7465
35°	6789	7104	7395
40°	6559	6961	7324
45°	6320	6797	7247
50°	6087	6612	7184
55°	5800	6493	7133
60°	5541	6336	7110
65°	5170	6297	7190
70°	4762	6242	7404
75°	4297	6331	7789
80°	3718	6519	7321
85°	3075	5468	5468



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	268.0	3.4
10°-20°	762.7	9.6
20°-30°	1141.3	14.4
30°-40°	1351.5	17.1
40°-50°	1377.4	17.4
50°-60°	1234.5	15.6
60°-70°	966.5	12.2
70°-80°	623.2	7.9
80°-90°	184.1	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°	2172.0	27.5
0°-40°	3523.5	44.5
0°-60°	6135.4	77.6
0°-90°	7909.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7909.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2834	2834	2834	2834	2834	
5°	2805	2812	2827	2830	2834	266
15°	2668	2683	2705	2727	2731	752
25°	2414	2436	2487	2520	2535	1111
35°	2067	2092	2162	2229	2251	1292
45°	1661	1698	1786	1878	1904	1282
55°	1236	1277	1384	1480	1520	1108
65°	812	860	989	1085	1129	806
75°	413	476	609	712	749	443
85°	100	136	177	177	177	117
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2834.1	2834.1	2834.1	2834.1	2834.1
2.5°	2815.7	2823.1	2837.8	2841.5	2841.5
5°	2804.6	2812.0	2826.8	2830.5	2834.1
7.5°	2786.2	2789.9	2808.3	2815.7	2819.4
10°	2756.7	2764.0	2782.5	2793.6	2797.2
12.5°	2716.1	2727.1	2749.3	2764.0	2767.7
15°	2668.1	2682.8	2705.0	2727.1	2730.8
17.5°	2616.4	2631.2	2660.7	2686.5	2693.9
20°	2553.7	2572.1	2605.4	2634.9	2645.9
22.5°	2491.0	2505.7	2546.3	2583.2	2594.3
25°	2413.5	2435.6	2487.3	2520.5	2535.2
27.5°	2332.3	2358.1	2409.8	2454.0	2468.8
30°	2247.4	2273.2	2328.6	2383.9	2402.4
32.5°	2158.8	2188.3	2254.8	2310.1	2328.6
35°	2066.6	2092.4	2162.5	2228.9	2251.1
37.5°	1970.6	1992.8	2073.9	2144.1	2166.2
40°	1867.3	1896.8	1981.7	2062.9	2085.0
42.5°	1764.0	1797.2	1882.1	1970.6	1992.8
45°	1660.6	1697.5	1786.1	1878.4	1904.2
47.5°	1561.0	1590.5	1690.2	1778.7	1815.6
50°	1454.0	1483.5	1579.4	1679.1	1716.0
52.5°	1343.3	1383.9	1487.2	1583.1	1627.4
55°	1236.2	1276.8	1383.9	1479.8	1520.4
57.5°	1136.6	1169.8	1280.5	1380.2	1420.8
60°	1029.6	1059.1	1177.2	1284.2	1321.1
62.5°	915.2	959.5	1081.3	1180.9	1225.2
65°	811.9	859.8	989.0	1084.9	1129.2
67.5°	715.9	760.2	885.7	989.0	1037.0
70°	605.2	664.3	793.4	896.7	941.0
72.5°	516.6	568.3	701.2	804.5	852.5
75°	413.3	476.0	608.9	712.2	749.1
77.5°	328.4	391.2	516.6	597.8	616.3
80°	239.9	302.6	420.7	461.3	472.4
82.5°	162.4	221.4	302.6	313.7	317.4
85°	99.6	136.5	177.1	177.1	177.1
87.5°	48.0	55.4	62.7	59.0	59.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)