

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: P389091

Luminaire Tested: **22CZ2-100VHE-S-UNV-L940-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: P389091  
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: 22CZ2-100VHE-S-UNV-L940-CD1-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8852.0 lumens  
Efficiency: N/A  
Efficacy: 113.9 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

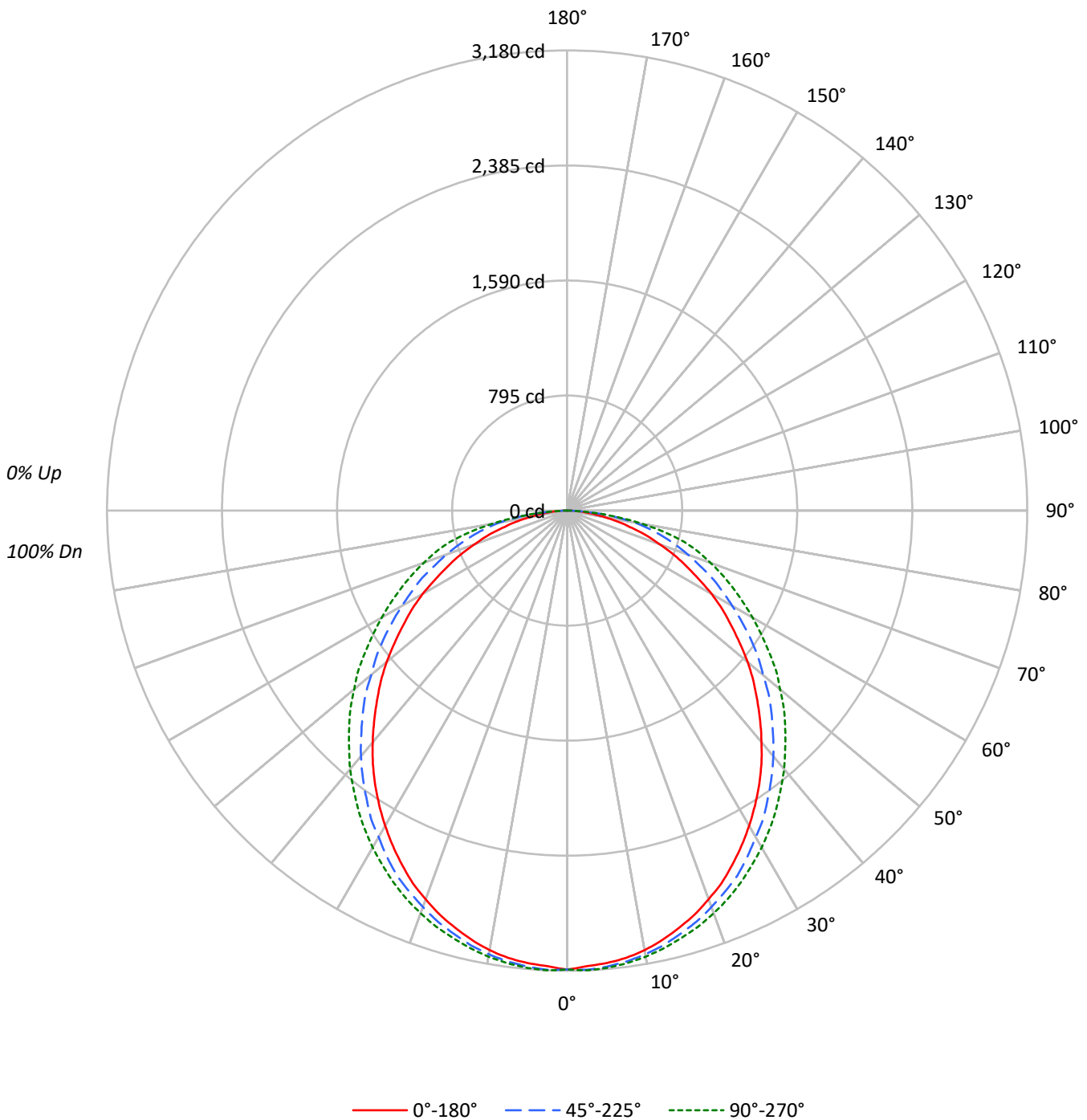
Input Watts (W): 77.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	8536	8536	8536
5°	8479	8546	8568
10°	8430	8509	8554
15°	8319	8434	8515
20°	8185	8350	8480
25°	8020	8265	8425
30°	7816	8098	8355
35°	7598	7951	8276
40°	7341	7791	8197
45°	7073	7607	8111
50°	6813	7400	8040
55°	6491	7266	7983
60°	6202	7091	7958
65°	5785	7048	8047
70°	5329	6987	8286
75°	4810	7086	8717
80°	4161	7296	8193
85°	3443	6120	6120



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	300.0	3.4
10°-20°	853.6	9.6
20°-30°	1277.3	14.4
30°-40°	1512.6	17.1
40°-50°	1541.5	17.4
50°-60°	1381.7	15.6
60°-70°	1081.7	12.2
70°-80°	697.5	7.9
80°-90°	206.1	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°	2430.9	27.5
0°-40°	3943.5	44.5
0°-60°	6866.7	77.6
0°-90°	8852.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8852.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3172	3172	3172	3172	3172	
5°	3139	3147	3164	3168	3172	298
15°	2986	3003	3027	3052	3056	842
25°	2701	2726	2784	2821	2837	1243
35°	2313	2342	2420	2495	2519	1445
45°	1859	1900	1999	2102	2131	1435
55°	1384	1429	1549	1656	1702	1241
65°	909	962	1107	1214	1264	903
75°	463	533	682	797	838	496
85°	112	153	198	198	198	131
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3171.9	3171.9	3171.9	3171.9	3171.9
2.5°	3151.3	3159.6	3176.1	3180.2	3180.2
5°	3138.9	3147.2	3163.7	3167.8	3171.9
7.5°	3118.3	3122.4	3143.0	3151.3	3155.4
10°	3085.2	3093.5	3114.1	3126.5	3130.6
12.5°	3039.8	3052.2	3077.0	3093.5	3097.6
15°	2986.1	3002.6	3027.4	3052.2	3056.3
17.5°	2928.3	2944.8	2977.8	3006.7	3015.0
20°	2858.1	2878.7	2915.9	2948.9	2961.3
22.5°	2787.8	2804.4	2849.8	2891.1	2903.5
25°	2701.1	2725.9	2783.7	2820.9	2837.4
27.5°	2610.2	2639.2	2697.0	2746.5	2763.1
30°	2515.3	2544.2	2606.1	2668.1	2688.7
32.5°	2416.1	2449.2	2523.5	2585.5	2606.1
35°	2312.9	2341.8	2420.3	2494.6	2519.4
37.5°	2205.5	2230.3	2321.1	2399.6	2424.4
40°	2089.9	2122.9	2217.9	2308.7	2333.5
42.5°	1974.2	2011.4	2106.4	2205.5	2230.3
45°	1858.6	1899.9	1999.0	2102.2	2131.2
47.5°	1747.0	1780.1	1891.6	1990.7	2032.0
50°	1627.3	1660.3	1767.7	1879.2	1920.5
52.5°	1503.4	1548.8	1664.4	1771.8	1821.4
55°	1383.6	1429.0	1548.8	1656.2	1701.6
57.5°	1272.1	1309.3	1433.2	1544.7	1590.1
60°	1152.3	1185.4	1317.5	1437.3	1478.6
62.5°	1024.3	1073.8	1210.1	1321.6	1371.2
65°	908.6	962.3	1106.9	1214.3	1263.8
67.5°	801.2	850.8	991.2	1106.9	1160.6
70°	677.3	743.4	888.0	1003.6	1053.2
72.5°	578.2	636.0	784.7	900.4	954.1
75°	462.6	532.8	681.5	797.1	838.4
77.5°	367.6	437.8	578.2	669.1	689.7
80°	268.5	338.7	470.8	516.3	528.7
82.5°	181.7	247.8	338.7	351.1	355.2
85°	111.5	152.8	198.2	198.2	198.2
87.5°	53.7	62.0	70.2	66.1	66.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)