

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: P388179

Luminaire Tested: **22CZ2-110VHE-UNV-L940-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: P388179  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-110VHE-UNV-L940-CD2-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9222.2 lumens  
Efficiency: N/A  
Efficacy: 105.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

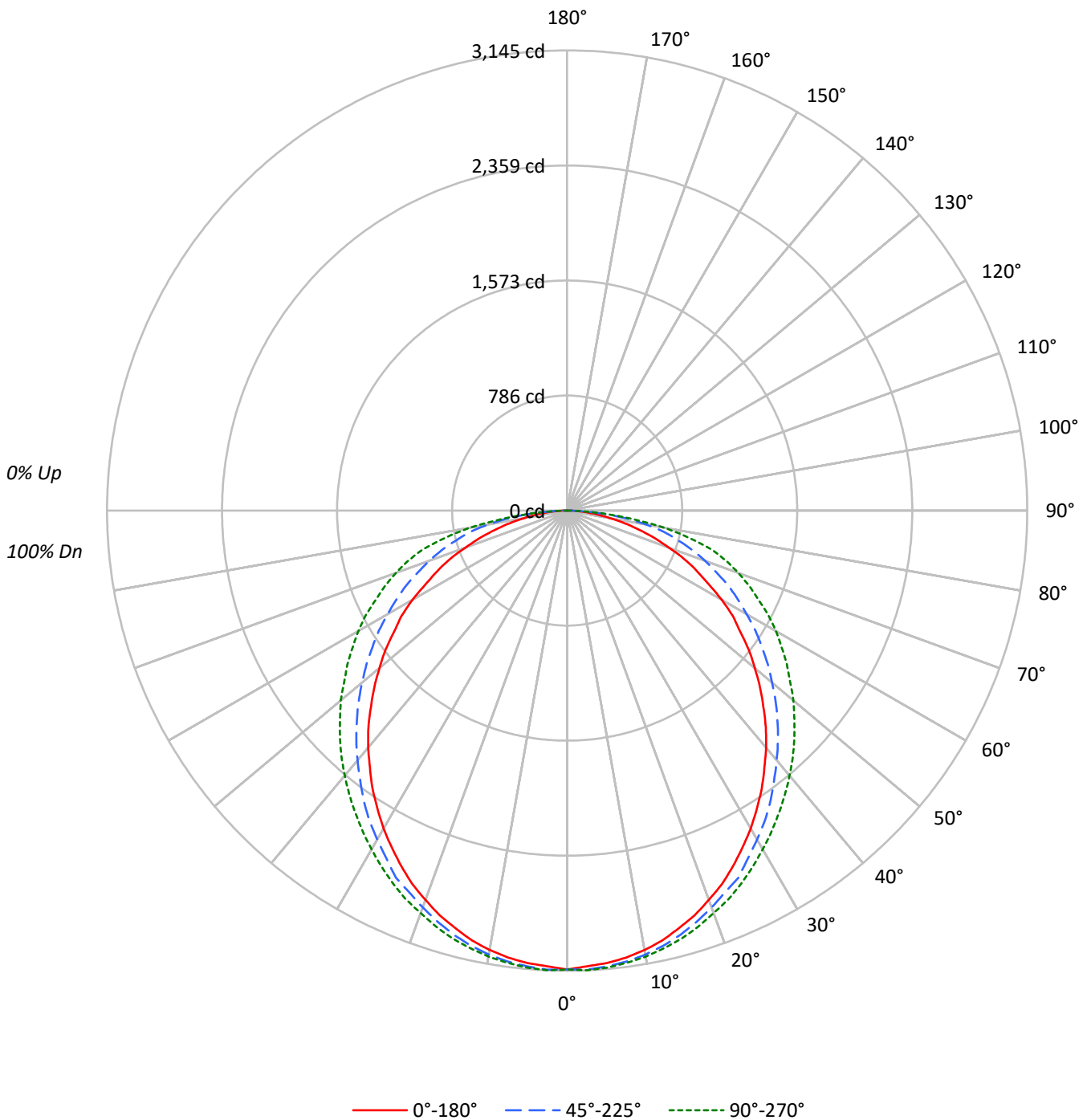
Input Watts (W): 87.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	8438	8438	8438
5°	8385	8446	8470
10°	8333	8420	8457
15°	8230	8357	8432
20°	8109	8265	8382
25°	7963	8219	8354
30°	7798	8066	8305
35°	7618	7961	8289
40°	7429	7827	8305
45°	7219	7737	8359
50°	7010	7656	8454
55°	6770	7622	8601
60°	6570	7620	8866
65°	6241	7744	9189
70°	5820	7891	9783
75°	5332	8163	10569
80°	4641	8509	10408
85°	4063	7565	8265



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	296.6	3.2
10°-20°	844.7	9.2
20°-30°	1268.0	13.7
30°-40°	1515.2	16.4
40°-50°	1575.6	17.1
50°-60°	1460.3	15.8
60°-70°	1197.8	13.0
70°-80°	809.7	8.8
80°-90°	254.4	2.8
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°	2409.2	26.1
0°-40°	3924.4	42.6
0°-60°	6960.3	75.5
0°-90°	9222.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9222.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3136	3136	3136	3136	3136	
5°	3104	3108	3127	3131	3136	295
15°	2954	2968	3000	3018	3027	833
25°	2682	2705	2768	2800	2814	1235
35°	2319	2351	2423	2496	2523	1449
45°	1897	1933	2033	2151	2196	1465
55°	1443	1488	1625	1770	1833	1297
65°	980	1035	1216	1375	1443	969
75°	513	599	785	944	1016	544
85°	132	182	245	272	268	149
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3135.7	3135.7	3135.7	3135.7	3135.7
2.5°	3117.6	3126.6	3140.3	3144.8	3144.8
5°	3104.0	3108.5	3126.6	3131.2	3135.7
7.5°	3081.3	3090.3	3108.5	3113.0	3117.6
10°	3049.5	3058.6	3081.3	3090.3	3094.9
12.5°	3008.7	3017.7	3045.0	3058.6	3063.1
15°	2954.2	2967.8	2999.6	3017.7	3026.8
17.5°	2899.7	2913.4	2945.1	2972.4	2981.4
20°	2831.7	2863.4	2886.1	2922.4	2927.0
22.5°	2763.6	2781.8	2822.6	2858.9	2877.1
25°	2681.9	2704.6	2768.1	2799.9	2813.5
27.5°	2595.7	2627.5	2677.4	2727.3	2745.5
30°	2509.5	2532.2	2595.7	2654.7	2672.8
32.5°	2414.2	2446.0	2514.0	2573.0	2600.2
35°	2318.9	2350.7	2423.3	2495.9	2523.1
37.5°	2214.5	2250.8	2323.4	2409.6	2446.0
40°	2114.7	2141.9	2228.1	2332.5	2364.3
42.5°	2010.3	2042.1	2132.8	2246.3	2282.6
45°	1896.9	1933.2	2033.0	2151.0	2196.4
47.5°	1787.9	1824.3	1933.2	2051.1	2105.6
50°	1674.5	1719.9	1828.8	1964.9	2019.4
52.5°	1565.6	1606.4	1729.0	1869.6	1919.5
55°	1443.1	1488.4	1624.6	1769.8	1833.3
57.5°	1343.2	1375.0	1524.7	1674.5	1738.0
60°	1220.7	1261.5	1415.8	1574.7	1647.3
62.5°	1089.1	1157.2	1316.0	1479.4	1552.0
65°	980.2	1034.7	1216.2	1375.0	1443.1
67.5°	866.7	925.7	1102.7	1270.6	1347.8
70°	739.7	816.8	1002.9	1170.8	1243.4
72.5°	626.2	707.9	898.5	1061.9	1139.0
75°	512.8	599.0	785.1	943.9	1016.5
77.5°	403.9	499.2	680.7	803.2	848.6
80°	299.5	390.3	549.1	635.3	671.6
82.5°	208.7	285.9	403.9	449.3	458.3
85°	131.6	181.5	245.0	272.3	267.7
87.5°	59.0	72.6	90.8	99.8	95.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)