

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: P390078

Luminaire Tested: **22CZ2-110VHE-HRP-UNV-L950-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: P390078  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-110VHE-HRP-UNV-L950-CD2-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8309.0 lumens  
Efficiency: N/A  
Efficacy: 94.7 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

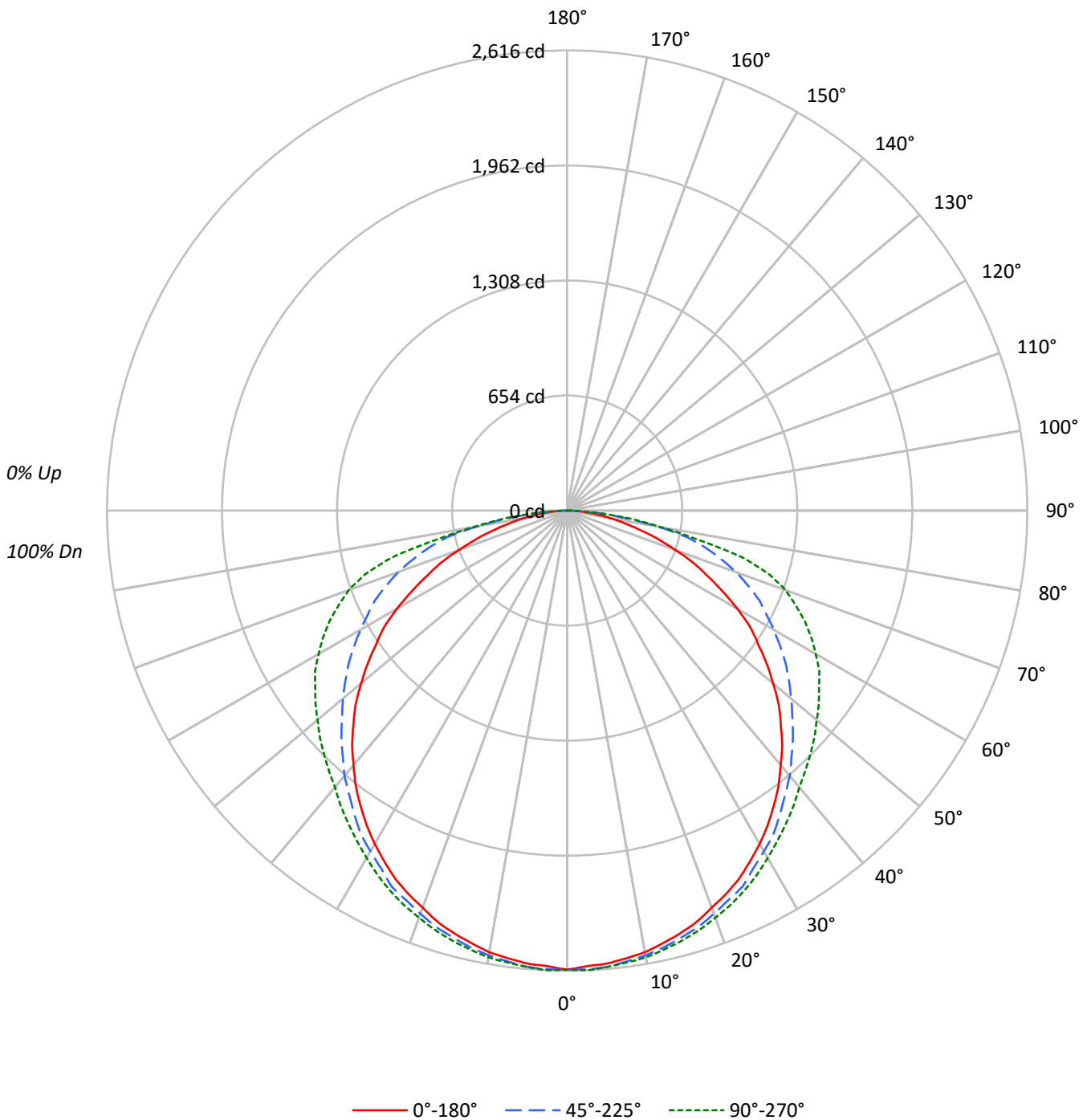
Input Watts (W): 87.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	7023	7023	7023
5°	6984	7034	7034
10°	6965	7015	7048
15°	6931	6999	7050
20°	6879	6984	7054
25°	6860	7005	7078
30°	6799	6951	7084
35°	6727	6928	7128
40°	6635	6914	7215
45°	6537	6909	7444
50°	6397	6960	7754
55°	6223	7112	8202
60°	6020	7303	8783
65°	5605	7667	9496
70°	5146	8032	10388
75°	4512	8453	10740
80°	3883	8052	8430
85°	3396	5851	6416



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	246.9	3.0
10°-20°	708.9	8.5
20°-30°	1081.5	13.0
30°-40°	1320.5	15.9
40°-50°	1412.0	17.0
50°-60°	1362.9	16.4
60°-70°	1173.2	14.1
70°-80°	793.8	9.6
80°-90°	209.4	2.5
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°	2037.3	24.5
0°-40°	3357.8	40.4
0°-60°	6132.6	73.8
0°-90°	8309.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8309.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2610	2610	2610	2610	2610	
5°	2586	2592	2604	2604	2604	246
15°	2488	2494	2512	2524	2530	702
25°	2310	2323	2359	2372	2384	1063
35°	2048	2066	2109	2152	2170	1281
45°	1718	1748	1815	1907	1956	1326
55°	1326	1369	1516	1669	1748	1189
65°	880	966	1204	1394	1491	875
75°	434	575	813	978	1033	466
85°	110	153	190	196	208	124
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2610.0	2610.0	2610.0	2610.0	2610.0
2.5°	2591.7	2597.8	2610.0	2610.0	2616.1
5°	2585.6	2591.7	2603.9	2603.9	2603.9
7.5°	2567.2	2573.3	2585.6	2591.7	2591.7
10°	2548.9	2555.0	2567.2	2573.3	2579.4
12.5°	2518.3	2524.4	2542.8	2555.0	2555.0
15°	2487.8	2493.9	2512.2	2524.4	2530.5
17.5°	2451.1	2463.3	2481.6	2493.9	2500.0
20°	2402.2	2414.4	2438.9	2457.2	2463.3
22.5°	2359.4	2371.6	2396.1	2414.4	2426.6
25°	2310.5	2322.7	2359.4	2371.6	2383.8
27.5°	2249.4	2261.6	2292.2	2316.6	2334.9
30°	2188.2	2200.5	2237.1	2267.7	2279.9
32.5°	2121.0	2139.3	2182.1	2206.6	2224.9
35°	2047.7	2066.0	2108.8	2151.6	2169.9
37.5°	1974.3	1992.6	2035.4	2090.4	2114.9
40°	1888.7	1913.2	1968.2	2041.5	2053.8
42.5°	1809.3	1839.8	1888.7	1974.3	2004.9
45°	1717.6	1748.2	1815.4	1907.1	1956.0
47.5°	1632.0	1662.6	1735.9	1845.9	1907.1
50°	1528.1	1570.9	1662.6	1790.9	1852.1
52.5°	1430.3	1467.0	1589.2	1729.8	1803.2
55°	1326.4	1369.2	1515.9	1668.7	1748.2
57.5°	1234.7	1271.4	1436.4	1607.6	1699.3
60°	1118.6	1167.5	1357.0	1540.3	1632.0
62.5°	996.3	1069.7	1277.5	1467.0	1564.8
65°	880.2	965.8	1204.1	1393.6	1491.4
67.5°	776.3	868.0	1112.5	1314.2	1405.9
70°	654.0	770.2	1020.8	1216.4	1320.3
72.5°	544.0	672.4	916.9	1112.5	1204.1
75°	434.0	574.6	813.0	978.0	1033.0
77.5°	336.2	470.7	696.8	745.7	751.8
80°	250.6	372.9	519.6	525.7	544.0
82.5°	171.1	262.8	336.2	366.7	372.9
85°	110.0	152.8	189.5	195.6	207.8
87.5°	48.9	55.0	67.2	61.1	61.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)