

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: P390072

Luminaire Tested: **22CZ2-110VHE-HRP-UNV-L935-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: P390072  
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-L935-CD2-SDWPD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7747.9 lumens  
Efficiency: N/A  
Efficacy: 88.3 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

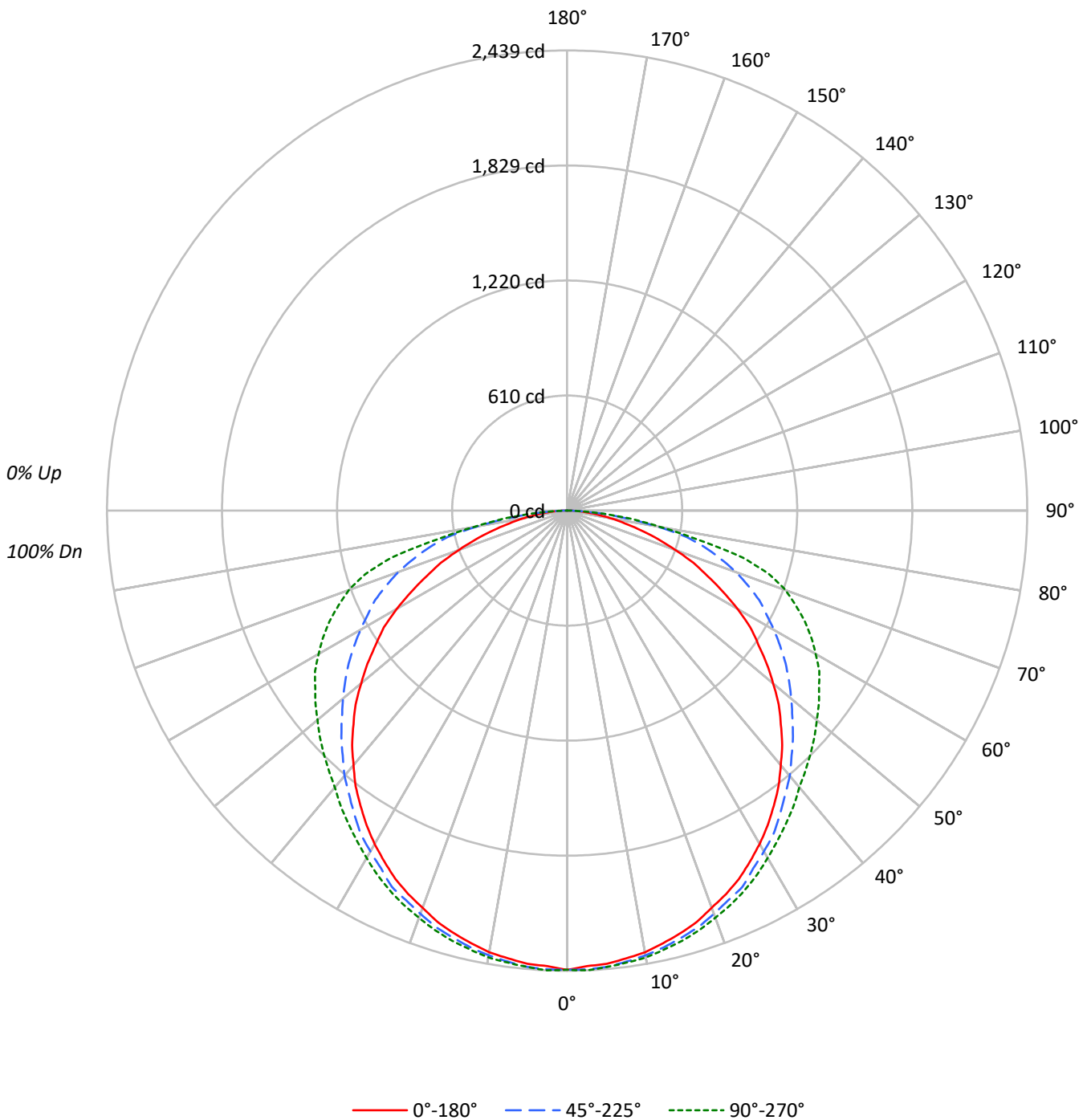
Input Watts (W): 87.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	6549	6549	6549
5°	6513	6559	6559
10°	6495	6541	6572
15°	6463	6526	6574
20°	6415	6513	6578
25°	6397	6532	6600
30°	6340	6482	6606
35°	6273	6460	6647
40°	6187	6447	6727
45°	6095	6442	6941
50°	5965	6490	7230
55°	5803	6632	7648
60°	5613	6810	8190
65°	5226	7149	8855
70°	4799	7489	9686
75°	4208	7882	10015
80°	3622	7508	7861
85°	3168	5456	5984



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	230.2	3.0
10°-20°	661.0	8.5
20°-30°	1008.5	13.0
30°-40°	1231.4	15.9
40°-50°	1316.6	17.0
50°-60°	1270.8	16.4
60°-70°	1093.9	14.1
70°-80°	740.2	9.6
80°-90°	195.3	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°	1899.7	24.5
0°-40°	3131.1	40.4
0°-60°	5718.5	73.8
0°-90°	7747.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7747.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2434	2434	2434	2434	2434	
5°	2411	2417	2428	2428	2428	229
15°	2320	2326	2343	2354	2360	654
25°	2154	2166	2200	2212	2223	992
35°	1909	1926	1966	2006	2023	1195
45°	1602	1630	1693	1778	1824	1236
55°	1237	1277	1414	1556	1630	1108
65°	821	900	1123	1300	1391	816
75°	405	536	758	912	963	434
85°	103	142	177	182	194	116
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2433.8	2433.8	2433.8	2433.8	2433.8
2.5°	2416.7	2422.4	2433.8	2433.8	2439.4
5°	2411.0	2416.7	2428.1	2428.1	2428.1
7.5°	2393.9	2399.6	2411.0	2416.7	2416.7
10°	2376.8	2382.5	2393.9	2399.6	2405.3
12.5°	2348.3	2354.0	2371.1	2382.5	2382.5
15°	2319.8	2325.5	2342.6	2354.0	2359.7
17.5°	2285.6	2297.0	2314.1	2325.5	2331.2
20°	2240.0	2251.4	2274.2	2291.3	2297.0
22.5°	2200.1	2211.5	2234.3	2251.4	2262.8
25°	2154.5	2165.9	2200.1	2211.5	2222.9
27.5°	2097.5	2108.9	2137.4	2160.2	2177.3
30°	2040.5	2051.9	2086.1	2114.6	2126.0
32.5°	1977.8	1994.9	2034.8	2057.6	2074.7
35°	1909.4	1926.5	1966.4	2006.3	2023.4
37.5°	1841.0	1858.1	1898.0	1949.3	1972.1
40°	1761.2	1784.0	1835.3	1903.7	1915.1
42.5°	1687.1	1715.6	1761.2	1841.0	1869.5
45°	1601.6	1630.1	1692.8	1778.3	1823.9
47.5°	1521.8	1550.3	1618.7	1721.3	1778.3
50°	1424.9	1464.8	1550.3	1670.0	1727.0
52.5°	1333.7	1367.9	1481.9	1613.0	1681.4
55°	1236.8	1276.7	1413.5	1556.0	1630.1
57.5°	1151.3	1185.5	1339.4	1499.0	1584.5
60°	1043.0	1088.6	1265.3	1436.3	1521.8
62.5°	929.0	997.4	1191.2	1367.9	1459.1
65°	820.7	900.5	1122.8	1299.5	1390.7
67.5°	723.9	809.4	1037.3	1225.4	1310.9
70°	609.9	718.2	951.8	1134.2	1231.1
72.5°	507.3	627.0	854.9	1037.3	1122.8
75°	404.7	535.8	758.1	911.9	963.2
77.5°	313.5	438.9	649.8	695.4	701.1
80°	233.7	347.7	484.5	490.2	507.3
82.5°	159.6	245.1	313.5	342.0	347.7
85°	102.6	142.5	176.7	182.4	193.8
87.5°	45.6	51.3	62.7	57.0	57.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)