

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: P390076

Luminaire Tested: **22CZ2-110VHE-HRP-UNV-L940-CD2-SWPD1-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: P390076
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-L940-CD2-SWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7923.6 lumens
Efficiency: N/A
Efficacy: 90.3 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

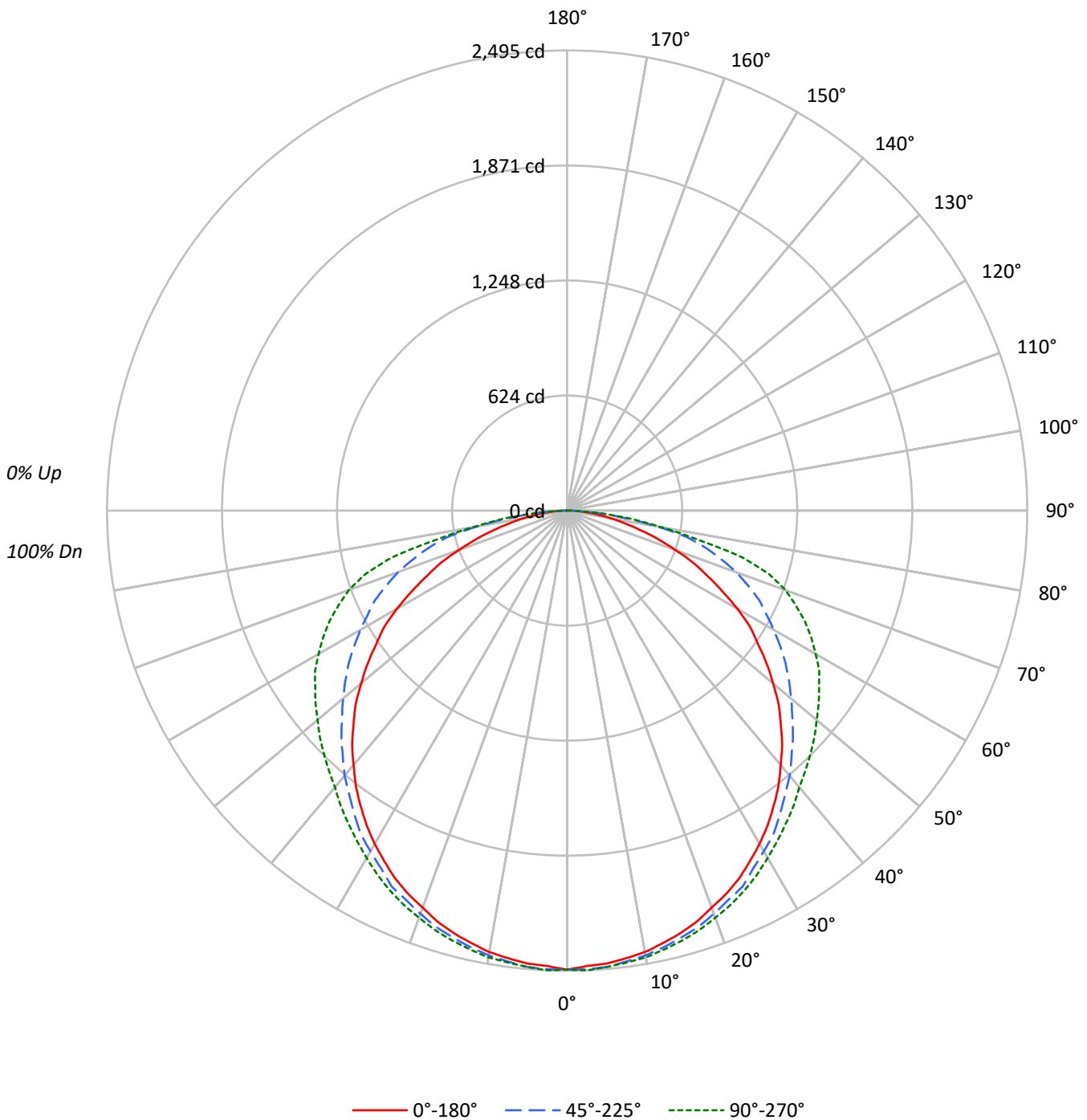
Input Watts (W): 87.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P390076

CATALOG NUMBER: 22CZ2-110VHE-HRP-UNV-L940-CD2-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P390076

CATALOG NUMBER: 22CZ2-110VHE-HRP-UNV-L940-CD2-SWPD1-U

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	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					100			
1	108	103	98	94	105	100	96	92	96	92	89	92	89	86	88	86	84	82					82			
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67					67			
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55					55			
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47					47			
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40					40			
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35					35			
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31					31			
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27					27			
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24					24			
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6698	6698	6698
5°	6660	6707	6707
10°	6642	6689	6721
15°	6609	6674	6723
20°	6560	6660	6727
25°	6542	6681	6750
30°	6484	6629	6756
35°	6415	6606	6798
40°	6327	6593	6880
45°	6233	6588	7098
50°	6100	6638	7394
55°	5934	6782	7821
60°	5741	6964	8376
65°	5345	7312	9056
70°	4907	7659	9906
75°	4303	8060	10242
80°	3704	7679	8040
85°	3239	5579	6120



TEST NUMBER: P390076

CATALOG NUMBER: 22CZ2-110VHE-HRP-UNV-L940-CD2-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	235.4	3.0
10°-20°	676.0	8.5
20°-30°	1031.3	13.0
30°-40°	1259.3	15.9
40°-50°	1346.5	17.0
50°-60°	1299.6	16.4
60°-70°	1118.8	14.1
70°-80°	756.9	9.6
80°-90°	199.7	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°	1942.8	24.5
0°-40°	3202.1	40.4
0°-60°	5848.2	73.8
0°-90°	7923.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7923.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2489	2489	2489	2489	2489	
5°	2466	2472	2483	2483	2483	234
15°	2372	2378	2396	2407	2413	669
25°	2203	2215	2250	2262	2273	1014
35°	1953	1970	2011	2052	2069	1222
45°	1638	1667	1731	1819	1865	1264
55°	1265	1306	1446	1591	1667	1133
65°	839	921	1148	1329	1422	835
75°	414	548	775	933	985	444
85°	105	146	181	186	198	118
90°	0	0	0	0	0	



TEST NUMBER: P390076

CATALOG NUMBER: 22CZ2-110VHE-HRP-UNV-L940-CD2-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2488.9	2488.9	2488.9	2488.9	2488.9
2.5°	2471.5	2477.3	2488.9	2488.9	2494.8
5°	2465.6	2471.5	2483.1	2483.1	2483.1
7.5°	2448.1	2454.0	2465.6	2471.5	2471.5
10°	2430.7	2436.5	2448.1	2454.0	2459.8
12.5°	2401.5	2407.3	2424.8	2436.5	2436.5
15°	2372.4	2378.2	2395.7	2407.3	2413.2
17.5°	2337.4	2349.0	2366.5	2378.2	2384.0
20°	2290.8	2302.4	2325.7	2343.2	2349.0
22.5°	2250.0	2261.6	2284.9	2302.4	2314.1
25°	2203.3	2215.0	2250.0	2261.6	2273.3
27.5°	2145.0	2156.7	2185.8	2209.2	2226.6
30°	2086.7	2098.4	2133.4	2162.5	2174.2
32.5°	2022.6	2040.1	2080.9	2104.2	2121.7
35°	1952.7	1970.2	2011.0	2051.8	2069.3
37.5°	1882.7	1900.2	1941.0	1993.5	2016.8
40°	1801.1	1824.4	1876.9	1946.9	1958.5
42.5°	1725.4	1754.5	1801.1	1882.7	1911.9
45°	1637.9	1667.1	1731.2	1818.6	1865.2
47.5°	1556.3	1585.5	1655.4	1760.3	1818.6
50°	1457.2	1498.0	1585.5	1707.9	1766.2
52.5°	1364.0	1398.9	1515.5	1649.6	1719.5
55°	1264.9	1305.7	1445.6	1591.3	1667.1
57.5°	1177.4	1212.4	1369.8	1533.0	1620.4
60°	1066.7	1113.3	1294.0	1468.9	1556.3
62.5°	950.1	1020.1	1218.2	1398.9	1492.2
65°	839.4	921.0	1148.3	1329.0	1422.3
67.5°	740.3	827.7	1060.9	1253.2	1340.6
70°	623.7	734.4	973.4	1160.0	1259.0
72.5°	518.8	641.2	874.3	1060.9	1148.3
75°	413.9	547.9	775.2	932.6	985.1
77.5°	320.6	448.8	664.5	711.1	717.0
80°	239.0	355.6	495.5	501.3	518.8
82.5°	163.2	250.6	320.6	349.7	355.6
85°	104.9	145.7	180.7	186.5	198.2
87.5°	46.6	52.5	64.1	58.3	58.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)