

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: P390797

Luminaire Tested: **22CZ2-90VHE-HRP-UNV-L940-CD1-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: P390797
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: 22CZ2-90VHE-HRP-UNV-L940-CD1-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: 6616.5 lumens
Efficiency: N/A
Efficacy: 97.0 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

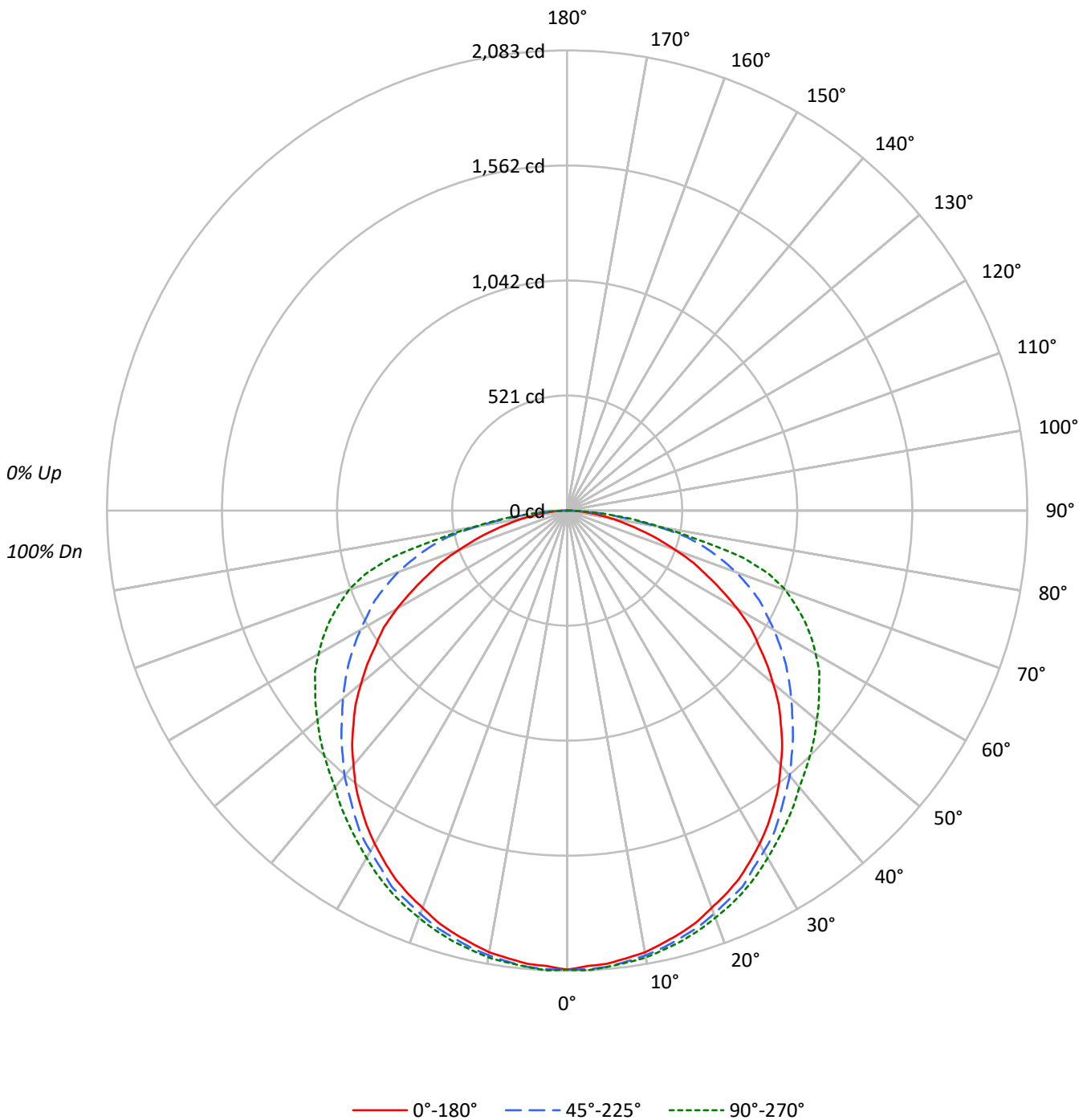
Input Watts (W): 68.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P390797

CATALOG NUMBER: 22CZ2-90VHE-HRP-UNV-L940-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P390797

CATALOG NUMBER: 22CZ2-90VHE-HRP-UNV-L940-CD1-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	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°	5593	5593	5593
5°	5562	5601	5601
10°	5546	5586	5613
15°	5519	5573	5614
20°	5478	5562	5617
25°	5463	5578	5636
30°	5414	5535	5641
35°	5357	5516	5676
40°	5283	5506	5745
45°	5205	5501	5928
50°	5094	5542	6174
55°	4955	5663	6531
60°	4794	5816	6994
65°	4463	6106	7562
70°	4098	6395	8272
75°	3593	6731	8553
80°	3093	6411	6713
85°	2705	4659	5110



TEST NUMBER: P390797

CATALOG NUMBER: 22CZ2-90VHE-HRP-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.6	3.0
10°-20°	564.5	8.5
20°-30°	861.2	13.0
30°-40°	1051.6	15.9
40°-50°	1124.4	17.0
50°-60°	1085.3	16.4
60°-70°	934.2	14.1
70°-80°	632.1	9.6
80°-90°	166.8	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°	1622.3	24.5
0°-40°	2673.8	40.4
0°-60°	4883.4	73.8
0°-90°	6616.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6616.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2078	2078	2078	2078	2078	
5°	2059	2064	2074	2074	2074	196
15°	1981	1986	2000	2010	2015	559
25°	1840	1850	1879	1888	1898	847
35°	1631	1645	1679	1713	1728	1020
45°	1368	1392	1446	1519	1558	1056
55°	1056	1090	1207	1329	1392	946
65°	701	769	959	1110	1188	697
75°	346	458	647	779	823	371
85°	88	122	151	156	166	99
90°	0	0	0	0	0	



TEST NUMBER: P390797

CATALOG NUMBER: 22CZ2-90VHE-HRP-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2078.4	2078.4	2078.4	2078.4	2078.4
2.5°	2063.8	2068.6	2078.4	2078.4	2083.2
5°	2058.9	2063.8	2073.5	2073.5	2073.5
7.5°	2044.3	2049.2	2058.9	2063.8	2063.8
10°	2029.7	2034.6	2044.3	2049.2	2054.0
12.5°	2005.3	2010.2	2024.8	2034.6	2034.6
15°	1981.0	1985.9	2000.5	2010.2	2015.1
17.5°	1951.8	1961.5	1976.1	1985.9	1990.7
20°	1912.9	1922.6	1942.1	1956.7	1961.5
22.5°	1878.8	1888.5	1908.0	1922.6	1932.3
25°	1839.9	1849.6	1878.8	1888.5	1898.3
27.5°	1791.2	1800.9	1825.3	1844.7	1859.3
30°	1742.5	1752.2	1781.4	1805.8	1815.5
32.5°	1689.0	1703.6	1737.6	1757.1	1771.7
35°	1630.6	1645.2	1679.2	1713.3	1727.9
37.5°	1572.2	1586.8	1620.8	1664.6	1684.1
40°	1504.0	1523.5	1567.3	1625.7	1635.4
42.5°	1440.7	1465.1	1504.0	1572.2	1596.5
45°	1367.7	1392.1	1445.6	1518.6	1557.6
47.5°	1299.6	1323.9	1382.3	1469.9	1518.6
50°	1216.8	1250.9	1323.9	1426.1	1474.8
52.5°	1139.0	1168.2	1265.5	1377.5	1435.9
55°	1056.2	1090.3	1207.1	1328.8	1392.1
57.5°	983.2	1012.4	1143.8	1280.1	1353.1
60°	890.7	929.7	1080.6	1226.6	1299.6
62.5°	793.4	851.8	1017.3	1168.2	1246.0
65°	700.9	769.0	958.9	1109.8	1187.6
67.5°	618.2	691.2	885.9	1046.5	1119.5
70°	520.8	613.3	812.8	968.6	1051.3
72.5°	433.2	535.4	730.1	885.9	958.9
75°	345.6	457.5	647.4	778.8	822.6
77.5°	267.7	374.8	554.9	593.8	598.7
80°	199.6	296.9	413.7	418.6	433.2
82.5°	136.3	209.3	267.7	292.0	296.9
85°	87.6	121.7	150.9	155.8	165.5
87.5°	38.9	43.8	53.5	48.7	48.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)