

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: P388441

Luminaire Tested: **22CZ2-70VHE-UNV-L935-CD1-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: P388441
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: 22CZ2-70VHE-UNV-L935-CD1-SWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5859.1 lumens
Efficiency: N/A
Efficacy: 116.5 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

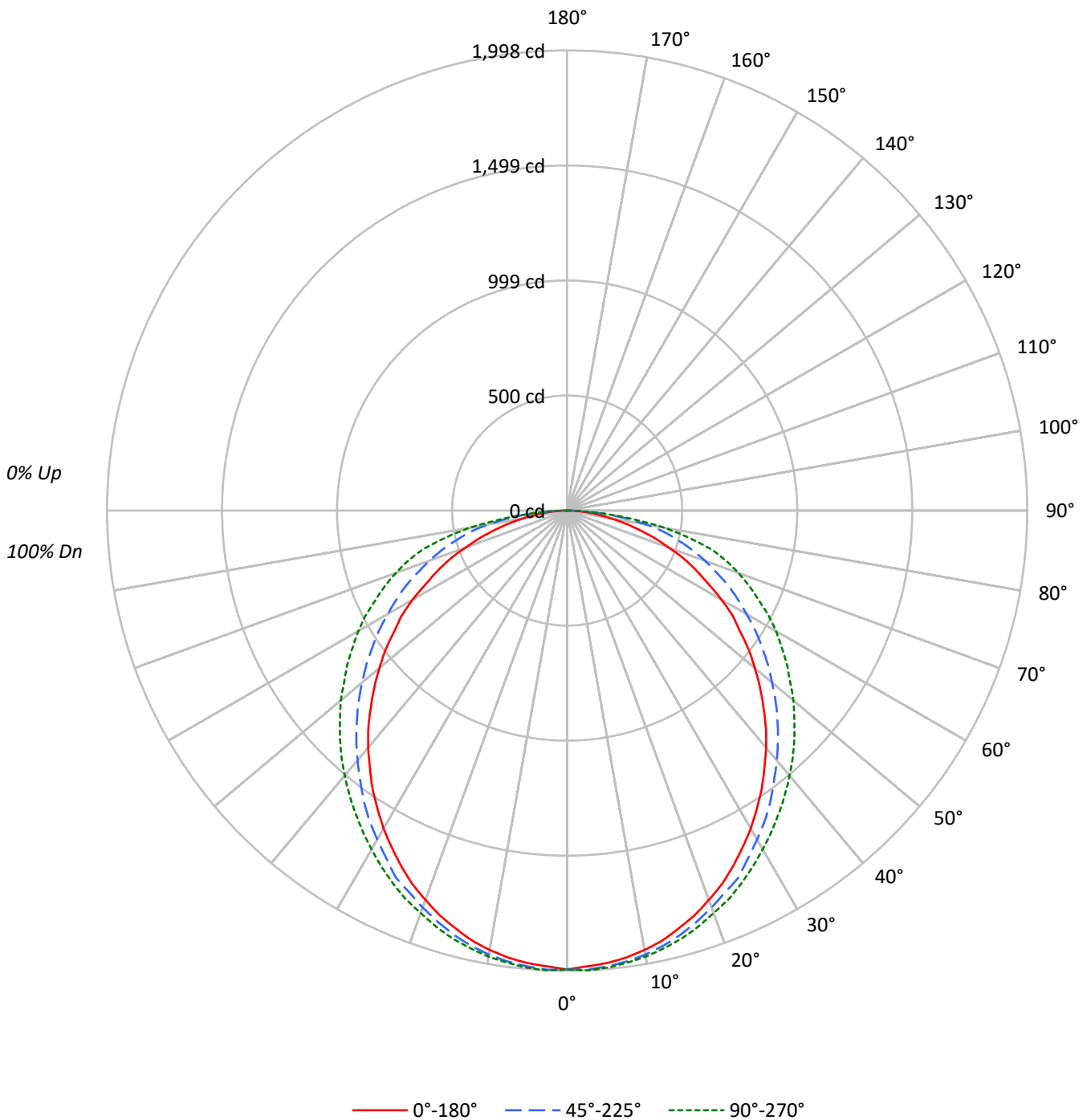
Input Watts (W): 50.3
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388441

CATALOG NUMBER: 22CZ2-70VHE-UNV-L935-CD1-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388441

CATALOG NUMBER: 22CZ2-70VHE-UNV-L935-CD1-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	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°	5361	5361	5361
5°	5327	5366	5381
10°	5294	5349	5373
15°	5229	5309	5357
20°	5152	5251	5325
25°	5059	5222	5307
30°	4954	5124	5276
35°	4840	5058	5266
40°	4719	4973	5277
45°	4586	4915	5310
50°	4454	4864	5371
55°	4301	4842	5465
60°	4174	4841	5633
65°	3965	4920	5838
70°	3697	5013	6216
75°	3387	5186	6714
80°	2949	5407	6612
85°	2581	4807	5252



TEST NUMBER: P388441

CATALOG NUMBER: 22CZ2-70VHE-UNV-L935-CD1-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.4	3.2
10°-20°	536.6	9.2
20°-30°	805.6	13.7
30°-40°	962.6	16.4
40°-50°	1001.0	17.1
50°-60°	927.8	15.8
60°-70°	761.0	13.0
70°-80°	514.4	8.8
80°-90°	161.6	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°	1530.7	26.1
0°-40°	2493.3	42.6
0°-60°	4422.0	75.5
0°-90°	5859.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5859.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1992	1992	1992	1992	1992	
5°	1972	1975	1986	1989	1992	187
15°	1877	1886	1906	1917	1923	529
25°	1704	1718	1759	1779	1788	785
35°	1473	1493	1540	1586	1603	921
45°	1205	1228	1292	1367	1395	931
55°	917	946	1032	1124	1165	824
65°	623	657	773	874	917	616
75°	326	381	499	600	646	345
85°	84	115	156	173	170	95
90°	0	0	0	0	0	



TEST NUMBER: P388441

CATALOG NUMBER: 22CZ2-70VHE-UNV-L935-CD1-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1992.2	1992.2	1992.2	1992.2	1992.2
2.5°	1980.7	1986.4	1995.1	1998.0	1998.0
5°	1972.0	1974.9	1986.4	1989.3	1992.2
7.5°	1957.6	1963.4	1974.9	1977.8	1980.7
10°	1937.4	1943.2	1957.6	1963.4	1966.3
12.5°	1911.5	1917.2	1934.5	1943.2	1946.1
15°	1876.9	1885.5	1905.7	1917.2	1923.0
17.5°	1842.3	1850.9	1871.1	1888.4	1894.2
20°	1799.0	1819.2	1833.6	1856.7	1859.6
22.5°	1755.8	1767.3	1793.3	1816.3	1827.9
25°	1703.9	1718.3	1758.7	1778.9	1787.5
27.5°	1649.1	1669.3	1701.0	1732.7	1744.3
30°	1594.3	1608.8	1649.1	1686.6	1698.1
32.5°	1533.8	1554.0	1597.2	1634.7	1652.0
35°	1473.2	1493.4	1539.6	1585.7	1603.0
37.5°	1406.9	1430.0	1476.1	1530.9	1554.0
40°	1343.5	1360.8	1415.6	1481.9	1502.1
42.5°	1277.2	1297.4	1355.0	1427.1	1450.2
45°	1205.1	1228.2	1291.6	1366.6	1395.4
47.5°	1135.9	1159.0	1228.2	1303.1	1337.7
50°	1063.9	1092.7	1161.9	1248.4	1283.0
52.5°	994.7	1020.6	1098.4	1187.8	1219.5
55°	916.8	945.6	1032.1	1124.4	1164.8
57.5°	853.4	873.6	968.7	1063.9	1104.2
60°	775.5	801.5	899.5	1000.4	1046.6
62.5°	691.9	735.2	836.1	939.9	986.0
65°	622.7	657.3	772.7	873.6	916.8
67.5°	550.7	588.1	700.6	807.3	856.3
70°	469.9	519.0	637.2	743.8	790.0
72.5°	397.9	449.8	570.8	674.6	723.7
75°	325.8	380.6	498.8	599.7	645.8
77.5°	256.6	317.1	432.5	510.3	539.1
80°	190.3	247.9	348.9	403.6	426.7
82.5°	132.6	181.6	256.6	285.4	291.2
85°	83.6	115.3	155.7	173.0	170.1
87.5°	37.5	46.1	57.7	63.4	60.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)