

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: P388896

Luminaire Tested: **24CZ2-60VHE-UNV-L935-CD1-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: P388896
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60VHE-UNV-L935-CD1-SDWPD1-U
Description: 2x4 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: 4994.9 lumens
Efficiency: N/A
Efficacy: 129.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

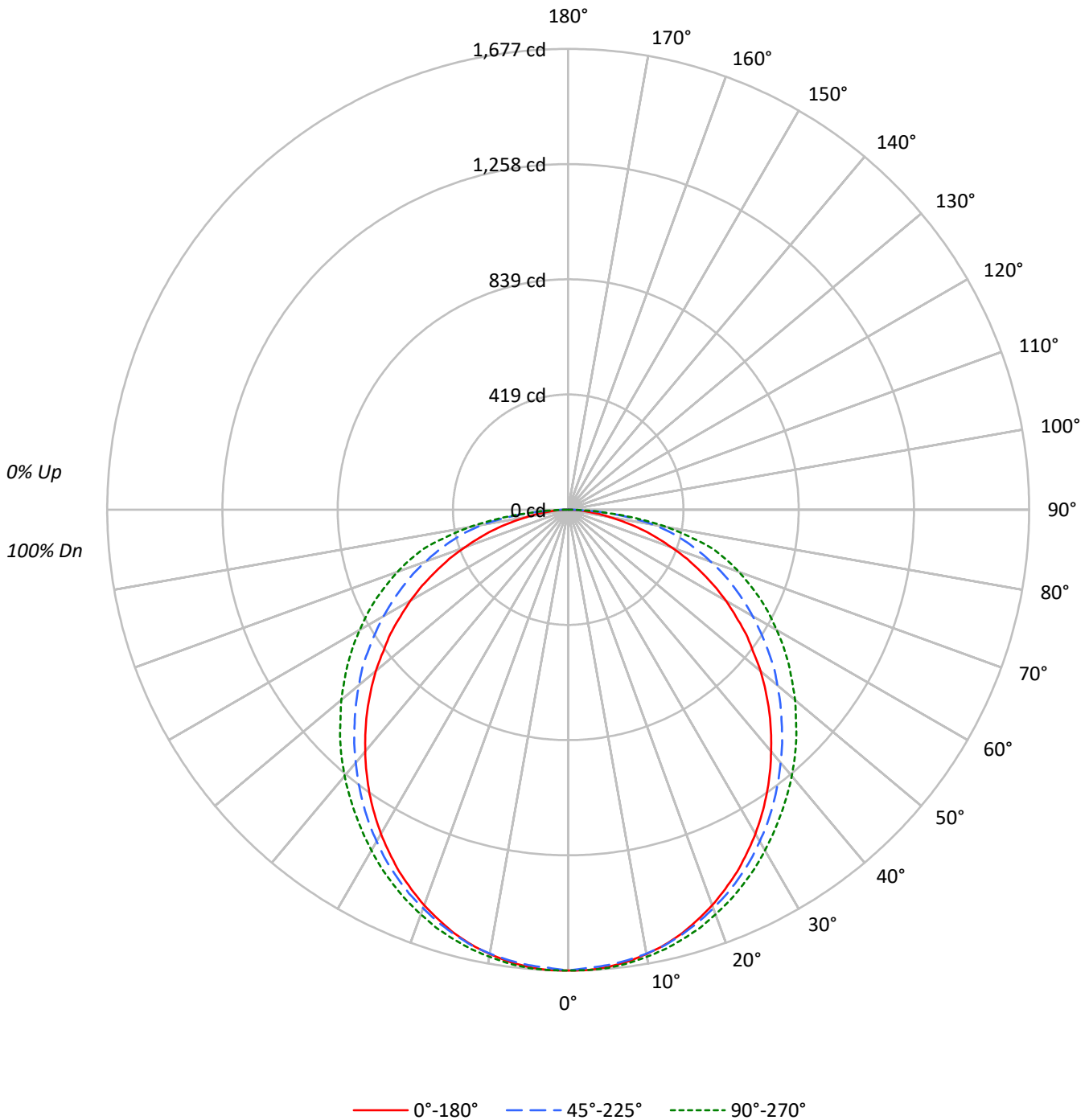
Input Watts (W): 38.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388896

CATALOG NUMBER: 24CZ2-60VHE-UNV-L935-CD1-SDWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388896

CATALOG NUMBER: 24CZ2-60VHE-UNV-L935-CD1-SDWPD1-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	93	89	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2256	2256	2256
5°	2256	2247	2261
10°	2243	2241	2257
15°	2225	2229	2252
20°	2194	2210	2244
25°	2158	2190	2235
30°	2116	2165	2225
35°	2070	2138	2218
40°	2017	2111	2222
45°	1967	2090	2233
50°	1912	2080	2254
55°	1854	2076	2295
60°	1781	2086	2355
65°	1688	2117	2457
70°	1567	2171	2597
75°	1430	2279	2817
80°	1175	2454	2816
85°	900	2265	2419



TEST NUMBER: P388896

CATALOG NUMBER: 24CZ2-60VHE-UNV-L935-CD1-SDWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.6	3.2
10°-20°	452.8	9.1
20°-30°	681.4	13.6
30°-40°	816.6	16.3
40°-50°	851.0	17.0
50°-60°	791.7	15.9
60°-70°	652.1	13.1
70°-80°	444.1	8.9
80°-90°	146.6	2.9
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°	1292.8	25.9
0°-40°	2109.4	42.2
0°-60°	3752.1	75.1
0°-90°	4994.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4994.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1677	1677	1677	1677	1677	
5°	1670	1670	1664	1672	1674	159
15°	1597	1599	1600	1615	1617	450
25°	1454	1460	1475	1500	1505	669
35°	1260	1275	1302	1337	1350	788
45°	1034	1055	1099	1154	1174	797
55°	790	817	885	955	978	704
65°	530	575	665	744	772	526
75°	275	337	438	517	542	290
85°	58	113	147	157	157	72
90°	0	0	0	0	0	



TEST NUMBER: P388896

CATALOG NUMBER: 24CZ2-60VHE-UNV-L935-CD1-SDWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1677.0	1677.0	1677.0	1677.0	1677.0
2.5°	1677.0	1677.0	1668.7	1677.0	1677.0
5°	1670.4	1670.4	1663.7	1672.0	1673.7
7.5°	1658.7	1660.4	1653.7	1663.7	1665.4
10°	1642.0	1643.7	1640.3	1650.3	1652.0
12.5°	1622.0	1623.7	1623.7	1635.3	1637.0
15°	1597.0	1598.7	1600.3	1615.3	1617.0
17.5°	1565.3	1570.3	1573.7	1592.0	1595.3
20°	1532.0	1537.0	1543.7	1563.7	1567.0
22.5°	1493.6	1500.3	1512.0	1533.7	1538.7
25°	1453.6	1460.3	1475.3	1500.3	1505.3
27.5°	1408.6	1418.6	1437.0	1463.6	1470.3
30°	1362.0	1372.0	1393.6	1422.0	1432.0
32.5°	1311.9	1325.3	1350.3	1382.0	1392.0
35°	1260.3	1275.3	1301.9	1336.9	1350.3
37.5°	1205.3	1221.9	1253.6	1291.9	1308.6
40°	1148.6	1168.6	1201.9	1246.9	1265.3
42.5°	1091.9	1110.2	1151.9	1200.3	1220.3
45°	1033.6	1055.2	1098.6	1153.6	1173.6
47.5°	973.5	995.2	1046.9	1105.2	1123.6
50°	913.5	935.2	993.5	1055.2	1076.9
52.5°	848.5	876.9	943.5	1005.2	1026.9
55°	790.2	816.8	885.2	955.2	978.5
57.5°	723.5	755.2	830.2	903.5	928.5
60°	661.8	695.1	775.2	850.2	875.2
62.5°	598.5	635.1	720.2	796.8	825.2
65°	530.1	575.1	665.1	743.5	771.8
67.5°	468.4	515.1	610.1	690.1	715.2
70°	398.4	455.1	551.8	631.8	660.1
72.5°	338.4	395.1	496.8	575.1	603.5
75°	275.1	336.7	438.4	516.8	541.8
77.5°	211.7	280.1	381.7	441.8	450.1
80°	151.7	223.4	316.7	351.7	363.4
82.5°	106.7	171.7	233.4	256.7	263.4
85°	58.3	113.4	146.7	156.7	156.7
87.5°	25.0	48.3	58.3	60.0	61.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)