

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: P388106

Luminaire Tested: **22CZ2-60VHE-SQR-UNV-L930-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: P388106
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1910-542-6)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-60VHE-SQR-UNV-L930-CD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4841.5 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

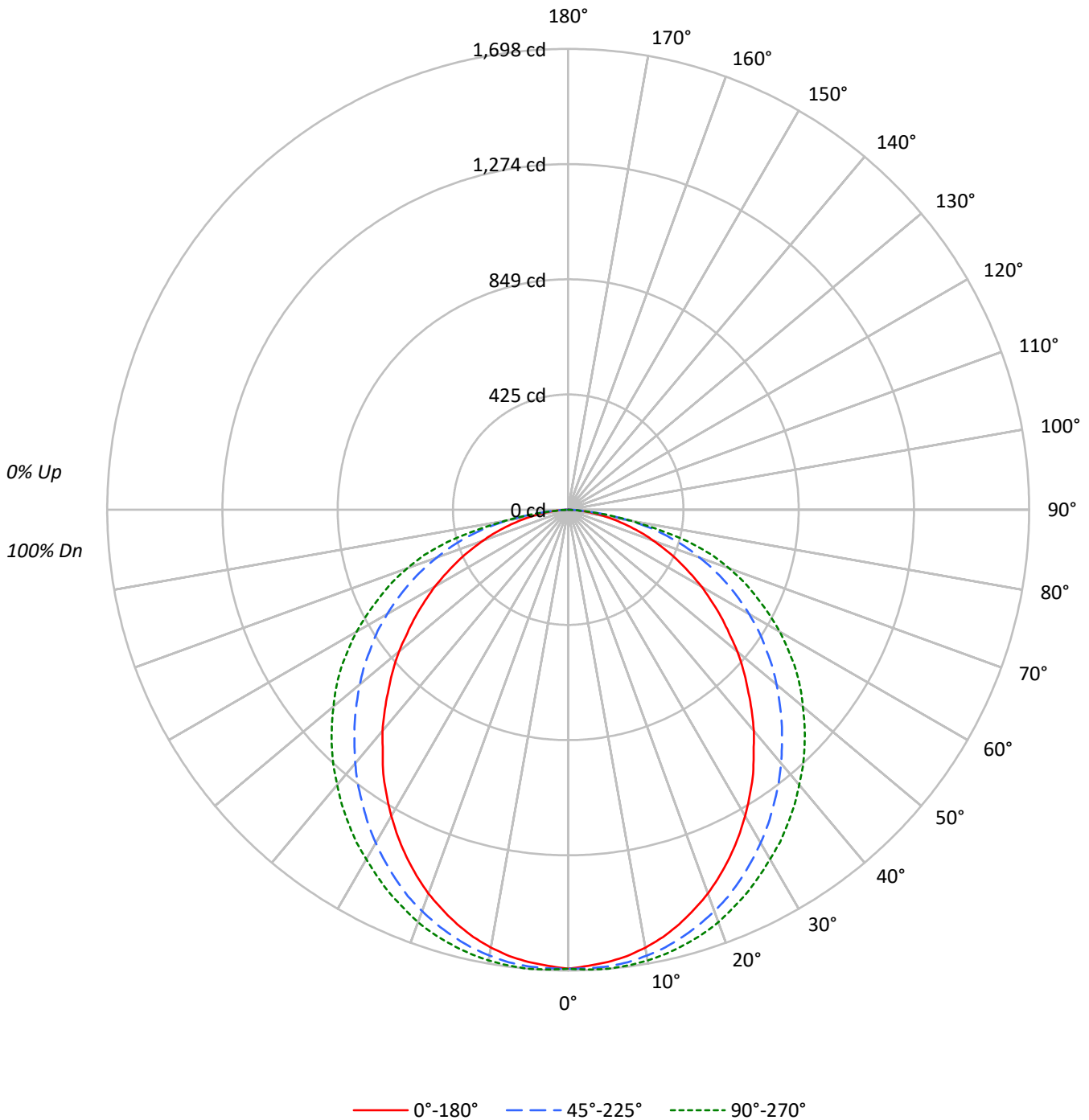
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4551	4551	4551
5°	4519	4562	4587
10°	4477	4559	4609
15°	4405	4539	4622
20°	4310	4508	4633
25°	4189	4462	4626
30°	4048	4405	4620
35°	3903	4341	4635
40°	3737	4286	4650
45°	3559	4233	4687
50°	3406	4194	4724
55°	3224	4161	4798
60°	3055	4143	4848
65°	2853	4111	4887
70°	2622	4050	4954
75°	2365	3943	4779
80°	2030	3490	3597
85°	1633	2056	1633



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	160.3	3.3
10°-20°	458.4	9.5
20°-30°	688.5	14.2
30°-40°	821.1	17.0
40°-50°	849.0	17.5
50°-60°	780.5	16.1
60°-70°	621.4	12.8
70°-80°	379.6	7.8
80°-90°	82.5	1.7
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°	1307.3	27.0
0°-40°	2128.4	44.0
0°-60°	3757.9	77.6
0°-90°	4841.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4841.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1691	1691	1691	1691	1691	
5°	1673	1678	1689	1696	1698	159
15°	1581	1599	1629	1652	1659	445
25°	1411	1445	1503	1544	1558	649
35°	1188	1239	1321	1390	1411	741
45°	935	1002	1112	1202	1232	723
55°	687	763	887	988	1023	615
65°	448	524	646	735	768	444
75°	228	294	379	446	460	242
85°	53	64	67	57	53	61
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1691.3	1691.3	1691.3	1691.3	1691.3
2.5°	1682.1	1684.4	1691.3	1695.8	1695.8
5°	1672.9	1677.5	1689.0	1695.8	1698.1
7.5°	1659.1	1666.0	1682.1	1691.3	1693.6
10°	1638.4	1647.6	1668.3	1682.1	1686.7
12.5°	1613.1	1626.9	1652.2	1670.6	1675.2
15°	1581.0	1599.3	1629.2	1652.2	1659.1
17.5°	1544.2	1567.2	1603.9	1631.5	1640.7
20°	1505.1	1528.1	1574.1	1606.2	1617.7
22.5°	1459.2	1489.0	1541.9	1578.7	1587.8
25°	1410.9	1445.4	1502.8	1544.2	1558.0
27.5°	1358.1	1399.4	1461.5	1512.0	1523.5
30°	1302.9	1346.6	1417.8	1473.0	1486.7
32.5°	1245.5	1296.0	1371.8	1433.9	1452.3
35°	1188.0	1238.6	1321.3	1390.2	1410.9
37.5°	1121.4	1181.1	1273.0	1344.3	1369.5
40°	1063.9	1121.4	1220.2	1298.3	1323.6
42.5°	999.6	1061.6	1165.0	1250.1	1279.9
45°	935.2	1001.9	1112.2	1201.8	1231.7
47.5°	875.5	942.1	1057.0	1151.2	1181.1
50°	813.5	882.4	1001.9	1098.4	1128.3
52.5°	746.8	822.6	946.7	1043.2	1077.7
55°	687.1	762.9	887.0	988.1	1022.6
57.5°	625.0	703.2	831.8	928.4	960.5
60°	567.6	643.4	769.8	864.0	900.8
62.5°	505.5	583.7	707.8	799.7	834.1
65°	448.1	523.9	645.7	735.3	767.5
67.5°	390.6	466.5	581.4	666.4	703.2
70°	333.2	409.0	514.7	597.5	629.6
72.5°	282.6	349.3	450.4	526.2	556.1
75°	227.5	294.1	379.2	445.8	459.6
77.5°	176.9	236.7	307.9	337.8	342.4
80°	131.0	176.9	225.2	232.1	232.1
82.5°	87.3	121.8	140.2	142.5	140.2
85°	52.9	64.3	66.6	57.4	52.9
87.5°	18.4	18.4	11.5	6.9	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)