

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: P388109

Luminaire Tested: **22CZ2-60VHE-SQR-UNV-L935-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: P388109
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-L935-CD1-U
Description: 2x2 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4961.2 lumens
Efficiency: N/A
Efficacy: 112.5 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

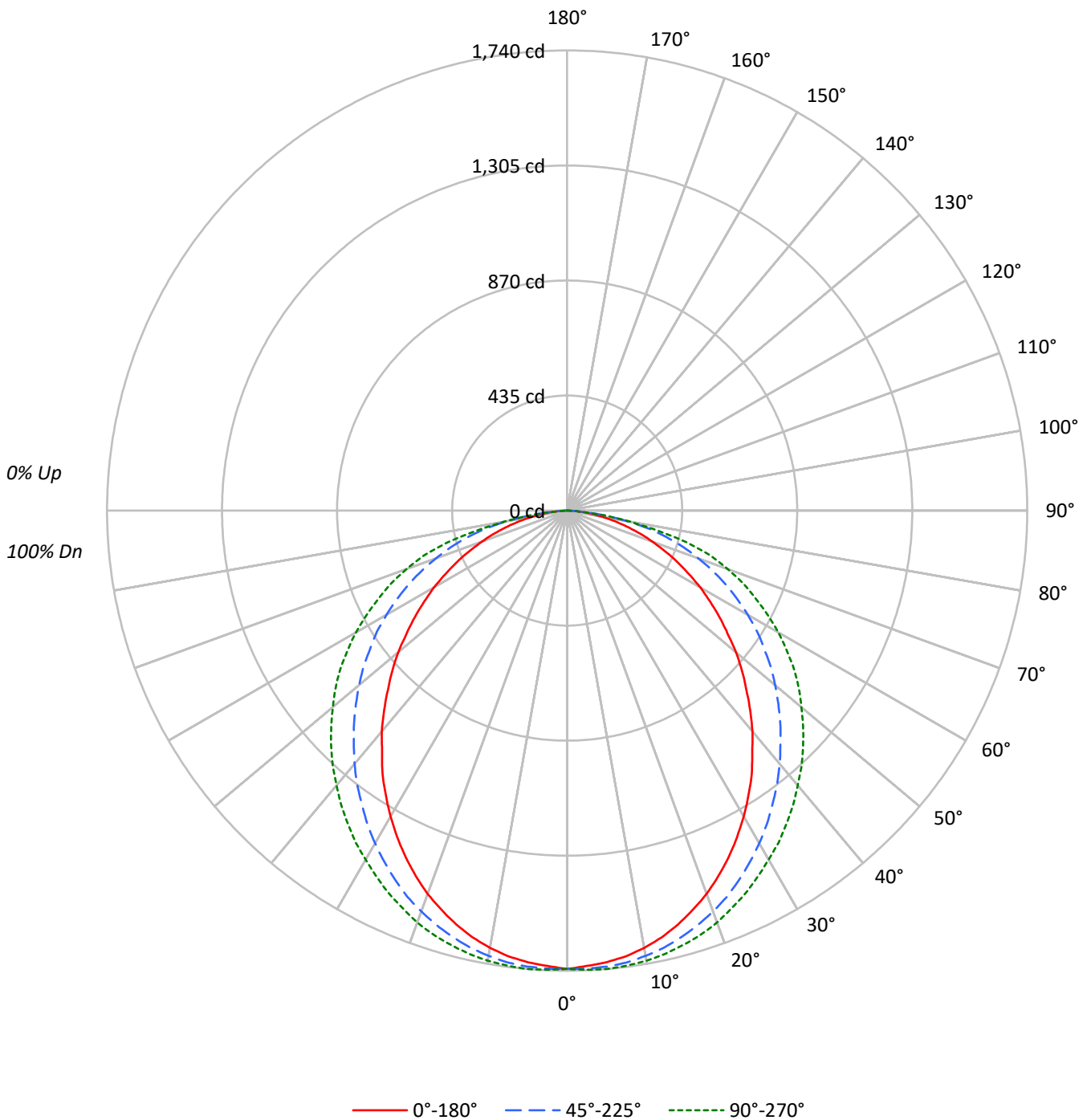
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388109

CATALOG NUMBER: 22CZ2-60VHE-SQR-UNV-L935-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388109

CATALOG NUMBER: 22CZ2-60VHE-SQR-UNV-L935-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	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°	4664	4664	4664
5°	4630	4675	4700
10°	4588	4671	4723
15°	4513	4651	4736
20°	4417	4619	4747
25°	4293	4573	4740
30°	4149	4515	4734
35°	3999	4448	4750
40°	3830	4392	4764
45°	3647	4337	4803
50°	3490	4298	4840
55°	3303	4264	4916
60°	3130	4245	4968
65°	2924	4213	5008
70°	2686	4150	5076
75°	2424	4039	4896
80°	2080	3577	3685
85°	1673	2109	1673



TEST NUMBER: P388109

CATALOG NUMBER: 22CZ2-60VHE-SQR-UNV-L935-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	164.3	3.3
10°-20°	469.7	9.5
20°-30°	705.5	14.2
30°-40°	841.5	17.0
40°-50°	870.0	17.5
50°-60°	799.8	16.1
60°-70°	636.8	12.8
70°-80°	389.0	7.8
80°-90°	84.6	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°	1339.6	27.0
0°-40°	2181.0	44.0
0°-60°	3850.9	77.6
0°-90°	4961.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4961.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1733	1733	1733	1733	1733	
5°	1714	1719	1731	1738	1740	163
15°	1620	1639	1670	1693	1700	456
25°	1446	1481	1540	1582	1596	665
35°	1217	1269	1354	1425	1446	760
45°	958	1027	1140	1232	1262	741
55°	704	782	909	1012	1048	630
65°	459	537	662	754	786	455
75°	233	301	388	457	471	248
85°	54	66	68	59	54	62
90°	0	0	0	0	0	



TEST NUMBER: P388109

CATALOG NUMBER: 22CZ2-60VHE-SQR-UNV-L935-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1733.1	1733.1	1733.1	1733.1	1733.1
2.5°	1723.6	1726.0	1733.1	1737.8	1737.8
5°	1714.2	1718.9	1730.7	1737.8	1740.1
7.5°	1700.1	1707.2	1723.6	1733.1	1735.4
10°	1678.9	1688.3	1709.5	1723.6	1728.4
12.5°	1653.0	1667.1	1693.0	1711.9	1716.6
15°	1620.0	1638.9	1669.5	1693.0	1700.1
17.5°	1582.4	1605.9	1643.6	1671.8	1681.3
20°	1542.3	1565.9	1613.0	1645.9	1657.7
22.5°	1495.2	1525.9	1580.0	1617.7	1627.1
25°	1445.8	1481.1	1540.0	1582.4	1596.5
27.5°	1391.6	1434.0	1497.6	1549.4	1561.2
30°	1335.1	1379.9	1452.9	1509.4	1523.5
32.5°	1276.3	1328.1	1405.8	1469.3	1488.2
35°	1217.4	1269.2	1354.0	1424.6	1445.8
37.5°	1149.1	1210.3	1304.5	1377.5	1403.4
40°	1090.2	1149.1	1250.4	1330.4	1356.3
42.5°	1024.3	1087.9	1193.8	1281.0	1311.6
45°	958.4	1026.7	1139.7	1231.5	1262.1
47.5°	897.1	965.4	1083.2	1179.7	1210.3
50°	833.6	904.2	1026.7	1125.6	1156.2
52.5°	765.3	843.0	970.1	1069.0	1104.4
55°	704.1	781.8	908.9	1012.5	1047.8
57.5°	640.5	720.5	852.4	951.3	984.3
60°	581.6	659.3	788.8	885.4	923.0
62.5°	518.0	598.1	725.3	819.4	854.8
65°	459.2	536.9	661.7	753.5	786.5
67.5°	400.3	478.0	595.7	682.9	720.5
70°	341.4	419.1	527.5	612.2	645.2
72.5°	289.6	357.9	461.5	539.2	569.8
75°	233.1	301.4	388.5	456.8	470.9
77.5°	181.3	242.5	315.5	346.1	350.9
80°	134.2	181.3	230.8	237.8	237.8
82.5°	89.5	124.8	143.6	146.0	143.6
85°	54.2	65.9	68.3	58.9	54.2
87.5°	18.8	18.8	11.8	7.1	2.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)