

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: P388104

Luminaire Tested: **22CZ2-60VHE-SQR-UNV-L930-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: P388104
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-SDWPD1-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: 4723.7 lumens
Efficiency: N/A
Efficacy: 107.1 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

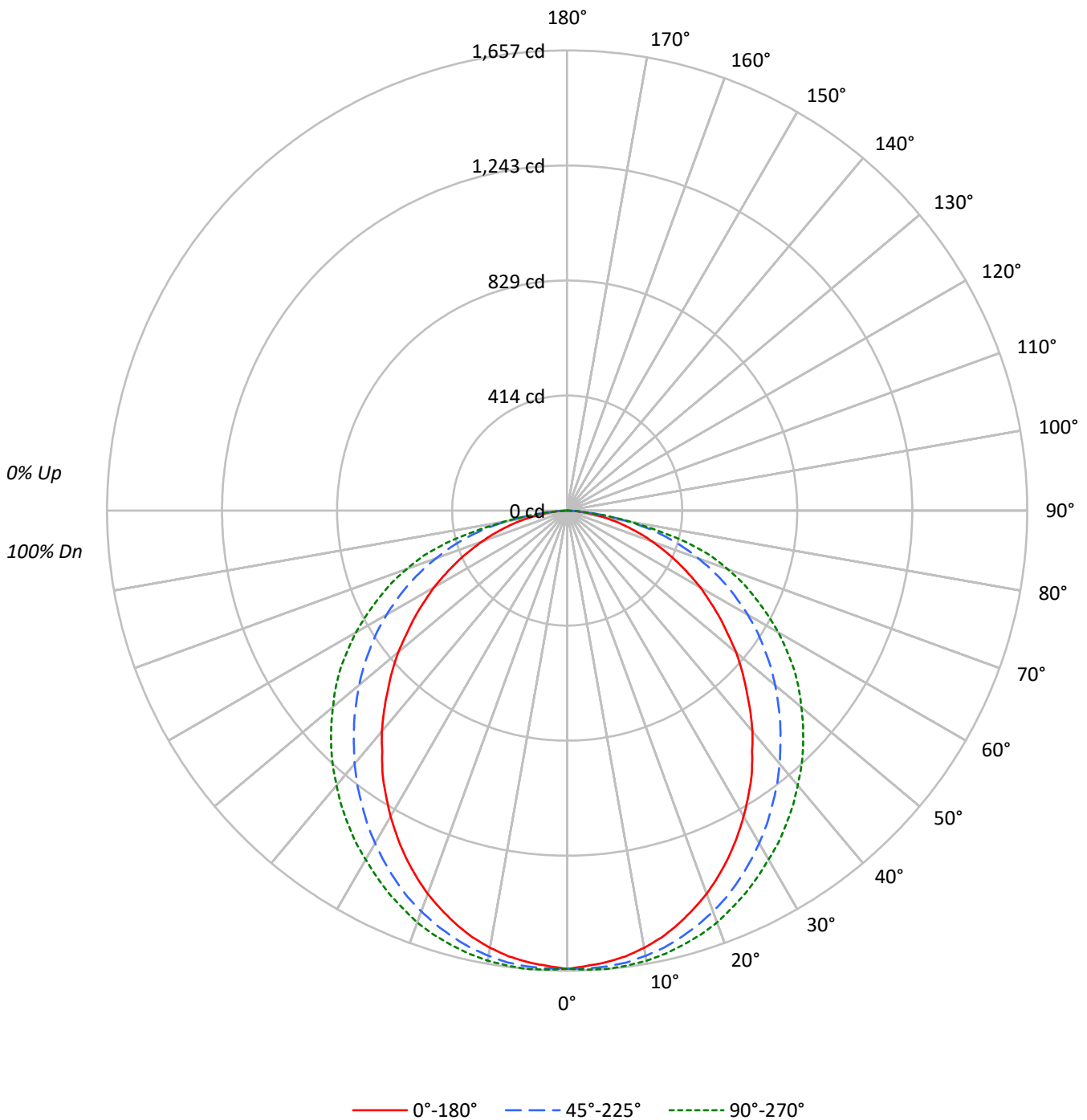
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4440	4440	4440
5°	4409	4451	4475
10°	4368	4448	4497
15°	4297	4428	4510
20°	4205	4398	4520
25°	4087	4354	4513
30°	3950	4298	4507
35°	3808	4235	4522
40°	3646	4182	4536
45°	3473	4129	4573
50°	3323	4092	4608
55°	3145	4060	4681
60°	2981	4042	4730
65°	2784	4011	4768
70°	2558	3951	4833
75°	2308	3846	4662
80°	1980	3405	3508
85°	1593	2007	1593



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	156.4	3.3
10°-20°	447.3	9.5
20°-30°	671.8	14.2
30°-40°	801.2	17.0
40°-50°	828.3	17.5
50°-60°	761.6	16.1
60°-70°	606.3	12.8
70°-80°	370.4	7.8
80°-90°	80.5	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°	1275.4	27.0
0°-40°	2076.6	44.0
0°-60°	3666.5	77.6
0°-90°	4723.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4723.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1650	1650	1650	1650	1650	
5°	1632	1637	1648	1655	1657	155
15°	1542	1560	1590	1612	1619	434
25°	1377	1410	1466	1507	1520	633
35°	1159	1208	1289	1356	1377	723
45°	912	978	1085	1173	1202	706
55°	670	744	865	964	998	600
65°	437	511	630	717	749	433
75°	222	287	370	435	448	236
85°	52	63	65	56	52	59
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1650.1	1650.1	1650.1	1650.1	1650.1
2.5°	1641.1	1643.4	1650.1	1654.6	1654.6
5°	1632.2	1636.7	1647.9	1654.6	1656.8
7.5°	1618.7	1625.4	1641.1	1650.1	1652.3
10°	1598.5	1607.5	1627.7	1641.1	1645.6
12.5°	1573.9	1587.3	1612.0	1629.9	1634.4
15°	1542.5	1560.4	1589.6	1612.0	1618.7
17.5°	1506.6	1529.0	1564.9	1591.8	1600.8
20°	1468.5	1490.9	1535.8	1567.1	1578.4
22.5°	1423.7	1452.8	1504.4	1540.2	1549.2
25°	1376.6	1410.2	1466.3	1506.6	1520.1
27.5°	1325.0	1365.4	1425.9	1475.2	1486.4
30°	1271.2	1313.8	1383.3	1437.1	1450.6
32.5°	1215.2	1264.5	1338.5	1399.0	1416.9
35°	1159.1	1208.4	1289.1	1356.4	1376.6
37.5°	1094.1	1152.4	1242.1	1311.6	1336.2
40°	1038.0	1094.1	1190.5	1266.7	1291.4
42.5°	975.3	1035.8	1136.7	1219.6	1248.8
45°	912.5	977.5	1085.1	1172.6	1201.7
47.5°	854.2	919.2	1031.3	1123.2	1152.4
50°	793.7	860.9	977.5	1071.7	1100.8
52.5°	728.6	802.6	923.7	1017.9	1051.5
55°	670.4	744.3	865.4	964.1	997.7
57.5°	609.8	686.0	811.6	905.8	937.2
60°	553.8	627.8	751.1	843.0	878.9
62.5°	493.2	569.5	690.5	780.2	813.8
65°	437.2	511.2	630.0	717.4	748.8
67.5°	381.1	455.1	567.2	650.2	686.0
70°	325.1	399.1	502.2	582.9	614.3
72.5°	275.8	340.8	439.4	513.4	542.6
75°	222.0	287.0	369.9	434.9	448.4
77.5°	172.6	230.9	300.4	329.6	334.1
80°	127.8	172.6	219.7	226.4	226.4
82.5°	85.2	118.8	136.8	139.0	136.8
85°	51.6	62.8	65.0	56.0	51.6
87.5°	17.9	17.9	11.2	6.7	2.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)