

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: P388105

Luminaire Tested: **22CZ2-60VHE-SQR-UNV-L930-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: P388105
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-SWPD1-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: 4781.4 lumens
Efficiency: N/A
Efficacy: 108.4 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

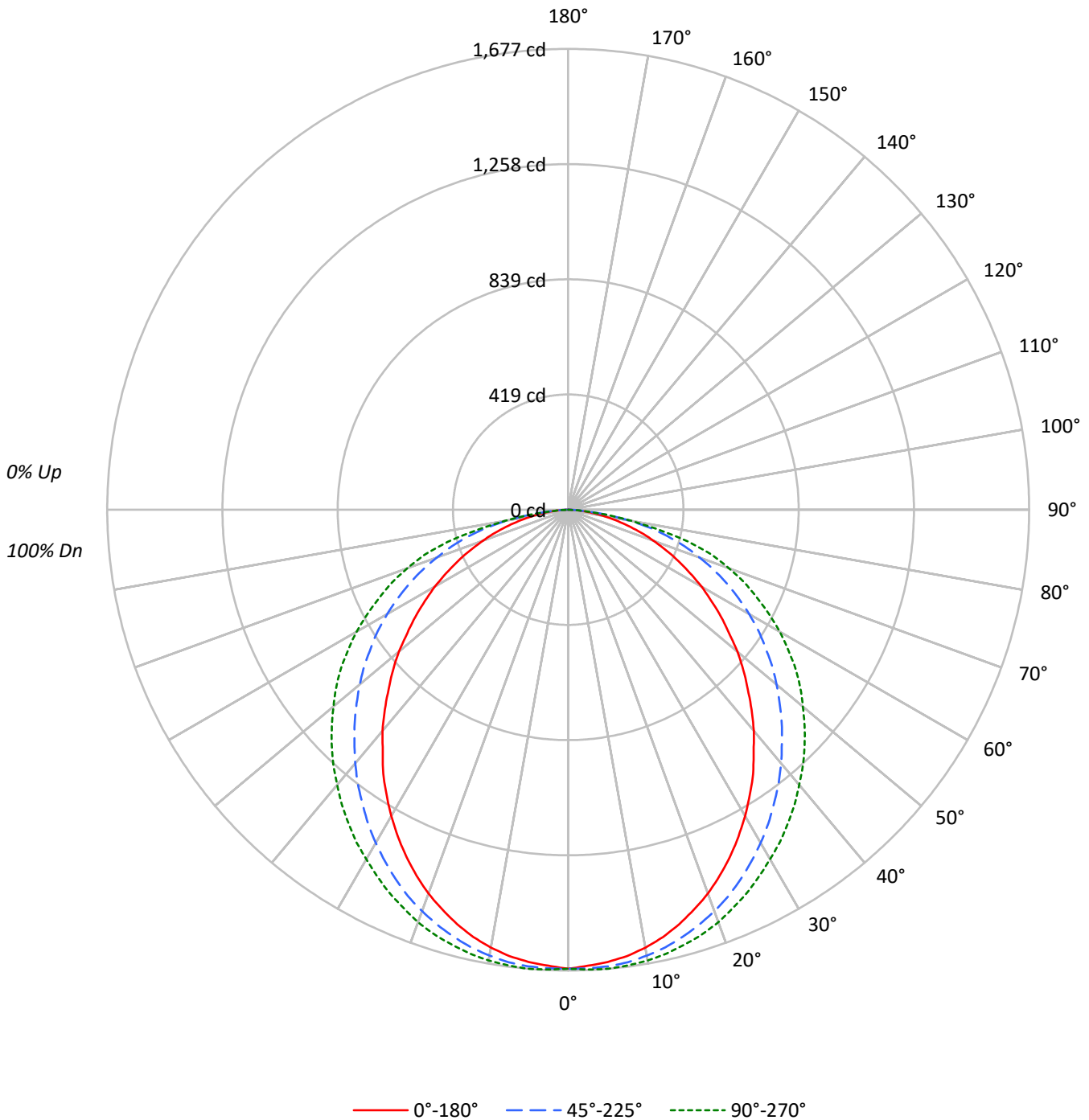
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4495	4495	4495
5°	4463	4506	4530
10°	4421	4502	4552
15°	4350	4483	4565
20°	4257	4452	4575
25°	4137	4407	4568
30°	3998	4351	4562
35°	3854	4287	4577
40°	3691	4233	4592
45°	3515	4180	4629
50°	3363	4142	4665
55°	3183	4110	4738
60°	3017	4091	4788
65°	2818	4060	4826
70°	2589	3999	4892
75°	2336	3893	4719
80°	2005	3446	3552
85°	1612	2032	1612



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.3	3.3
10°-20°	452.7	9.5
20°-30°	680.0	14.2
30°-40°	811.0	17.0
40°-50°	838.5	17.5
50°-60°	770.9	16.1
60°-70°	613.7	12.8
70°-80°	374.9	7.8
80°-90°	81.5	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°	1291.0	27.0
0°-40°	2102.0	44.0
0°-60°	3711.3	77.6
0°-90°	4781.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4781.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1670	1670	1670	1670	1670	
5°	1652	1657	1668	1675	1677	157
15°	1561	1580	1609	1632	1638	440
25°	1393	1427	1484	1525	1539	641
35°	1173	1223	1305	1373	1393	732
45°	924	989	1098	1187	1216	714
55°	678	753	876	976	1010	607
65°	442	517	638	726	758	438
75°	225	290	374	440	454	239
85°	52	64	66	57	52	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1670.3	1670.3	1670.3	1670.3	1670.3
2.5°	1661.2	1663.5	1670.3	1674.8	1674.8
5°	1652.1	1656.6	1668.0	1674.8	1677.1
7.5°	1638.5	1645.3	1661.2	1670.3	1672.5
10°	1618.1	1627.1	1647.6	1661.2	1665.7
12.5°	1593.1	1606.7	1631.7	1649.8	1654.4
15°	1561.3	1579.5	1609.0	1631.7	1638.5
17.5°	1525.0	1547.7	1584.0	1611.3	1620.3
20°	1486.4	1509.1	1554.5	1586.3	1597.6
22.5°	1441.1	1470.6	1522.7	1559.1	1568.1
25°	1393.4	1427.4	1484.2	1525.0	1538.6
27.5°	1341.2	1382.0	1443.3	1493.2	1504.6
30°	1286.7	1329.9	1400.2	1454.7	1468.3
32.5°	1230.0	1279.9	1354.8	1416.1	1434.2
35°	1173.3	1223.2	1304.9	1373.0	1393.4
37.5°	1107.5	1166.5	1257.2	1327.6	1352.5
40°	1050.7	1107.5	1205.0	1282.2	1307.2
42.5°	987.2	1048.5	1150.6	1234.5	1264.0
45°	923.6	989.4	1098.4	1186.9	1216.4
47.5°	864.6	930.4	1043.9	1137.0	1166.5
50°	803.4	871.4	989.4	1084.8	1114.3
52.5°	737.5	812.4	935.0	1030.3	1064.3
55°	678.5	753.4	876.0	975.8	1009.9
57.5°	617.3	694.4	821.5	916.8	948.6
60°	560.5	635.4	760.2	853.3	889.6
62.5°	499.3	576.4	699.0	789.7	823.8
65°	442.5	517.4	637.7	726.2	758.0
67.5°	385.8	460.7	574.2	658.1	694.4
70°	329.1	403.9	508.3	590.0	621.8
72.5°	279.1	344.9	444.8	519.7	549.2
75°	224.7	290.5	374.4	440.3	453.9
77.5°	174.7	233.7	304.1	333.6	338.1
80°	129.4	174.7	222.4	229.2	229.2
82.5°	86.2	120.3	138.4	140.7	138.4
85°	52.2	63.5	65.8	56.7	52.2
87.5°	18.2	18.2	11.3	6.8	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)