

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: P388110

Luminaire Tested: **22CZ2-60VHE-SQR-UNV-L940-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: P388110
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-L940-CD1-SDWPD1-U
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4890.7 lumens
Efficiency: N/A
Efficacy: 110.9 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

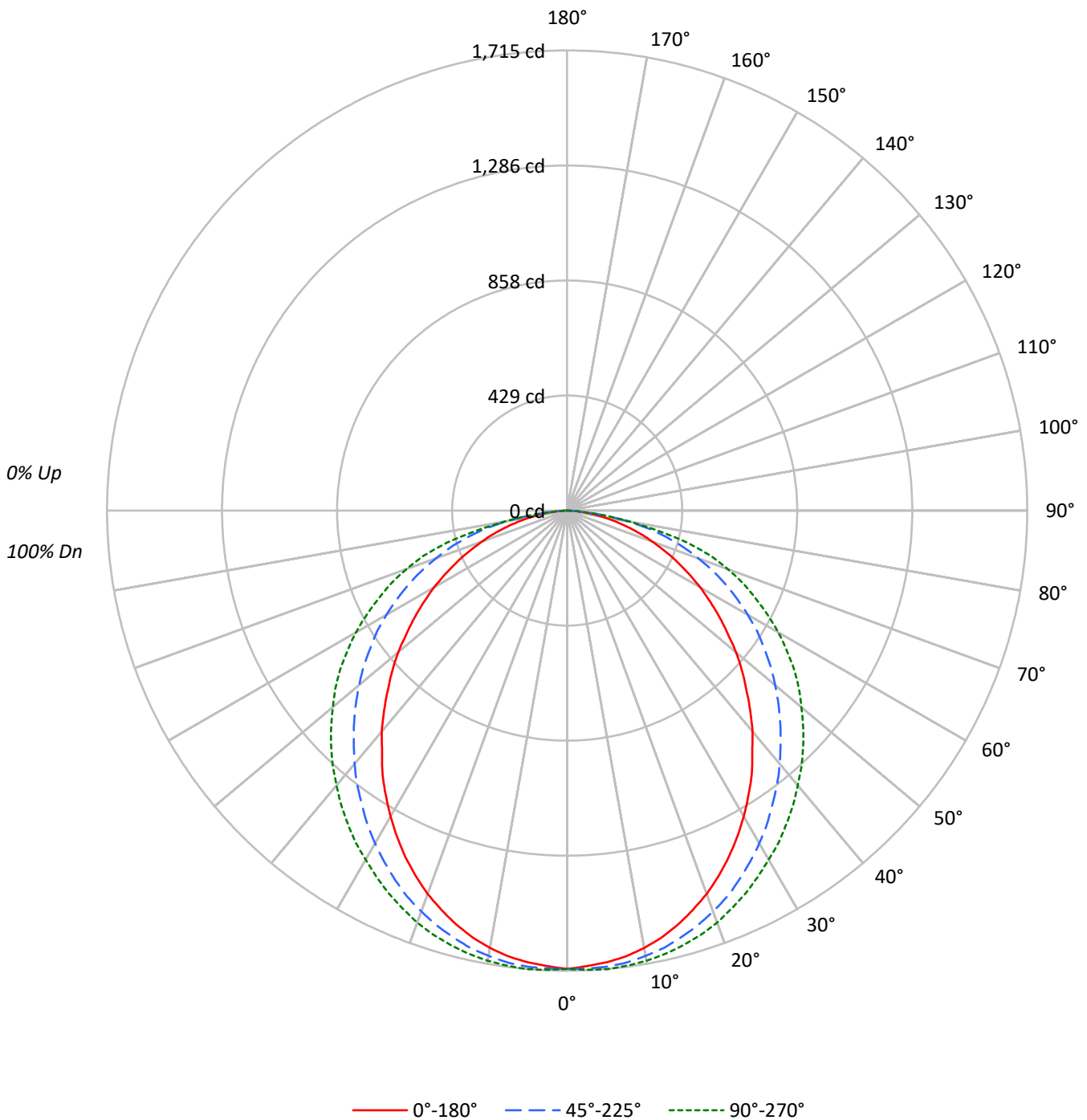
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4597	4597	4597
5°	4565	4609	4634
10°	4523	4605	4656
15°	4449	4585	4669
20°	4354	4554	4680
25°	4232	4507	4673
30°	4089	4450	4667
35°	3942	4385	4682
40°	3775	4330	4697
45°	3595	4276	4735
50°	3440	4237	4771
55°	3256	4204	4846
60°	3085	4185	4897
65°	2882	4153	4937
70°	2648	4091	5004
75°	2389	3982	4826
80°	2050	3526	3632
85°	1649	2078	1649



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.0	3.3
10°-20°	463.1	9.5
20°-30°	695.5	14.2
30°-40°	829.5	17.0
40°-50°	857.6	17.5
50°-60°	788.5	16.1
60°-70°	627.7	12.8
70°-80°	383.5	7.8
80°-90°	83.4	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°	1320.5	27.0
0°-40°	2150.0	44.0
0°-60°	3796.2	77.6
0°-90°	4890.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4890.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1708	1708	1708	1708	1708	
5°	1690	1694	1706	1713	1715	160
15°	1597	1616	1646	1669	1676	450
25°	1425	1460	1518	1560	1574	656
35°	1200	1251	1335	1404	1425	749
45°	945	1012	1124	1214	1244	731
55°	694	771	896	998	1033	621
65°	453	529	652	743	775	448
75°	230	297	383	450	464	245
85°	53	65	67	58	53	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1708.4	1708.4	1708.4	1708.4	1708.4
2.5°	1699.2	1701.5	1708.4	1713.1	1713.1
5°	1689.9	1694.5	1706.1	1713.1	1715.4
7.5°	1675.9	1682.9	1699.2	1708.4	1710.8
10°	1655.1	1664.3	1685.2	1699.2	1703.8
12.5°	1629.5	1643.4	1669.0	1687.5	1692.2
15°	1597.0	1615.6	1645.8	1669.0	1675.9
17.5°	1559.9	1583.1	1620.2	1648.1	1657.4
20°	1520.4	1543.6	1590.1	1622.6	1634.2
22.5°	1474.0	1504.2	1557.6	1594.7	1604.0
25°	1425.2	1460.1	1518.1	1559.9	1573.8
27.5°	1371.9	1413.6	1476.3	1527.4	1539.0
30°	1316.1	1360.3	1432.2	1487.9	1501.8
32.5°	1258.1	1309.2	1385.8	1448.5	1467.0
35°	1200.1	1251.2	1334.7	1404.4	1425.2
37.5°	1132.8	1193.1	1286.0	1357.9	1383.5
40°	1074.7	1132.8	1232.6	1311.5	1337.0
42.5°	1009.7	1072.4	1176.9	1262.8	1292.9
45°	944.7	1012.1	1123.5	1214.0	1244.2
47.5°	884.4	951.7	1067.8	1162.9	1193.1
50°	821.7	891.4	1012.1	1109.6	1139.7
52.5°	754.4	831.0	956.4	1053.8	1088.7
55°	694.1	770.7	896.0	998.1	1033.0
57.5°	631.4	710.3	840.3	937.8	970.3
60°	573.3	649.9	777.6	872.8	909.9
62.5°	510.7	589.6	714.9	807.8	842.6
65°	452.6	529.2	652.3	742.8	775.3
67.5°	394.6	471.2	587.3	673.2	710.3
70°	336.6	413.2	520.0	603.5	636.0
72.5°	285.5	352.8	455.0	531.6	561.7
75°	229.8	297.1	383.0	450.3	464.2
77.5°	178.7	239.1	311.0	341.2	345.9
80°	132.3	178.7	227.5	234.4	234.4
82.5°	88.2	123.0	141.6	143.9	141.6
85°	53.4	65.0	67.3	58.0	53.4
87.5°	18.6	18.6	11.6	7.0	2.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)