

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: P388108

Luminaire Tested: **22CZ2-60VHE-SQR-UNV-L935-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: P388108
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-SWPD1-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: 4899.7 lumens
Efficiency: N/A
Efficacy: 111.1 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

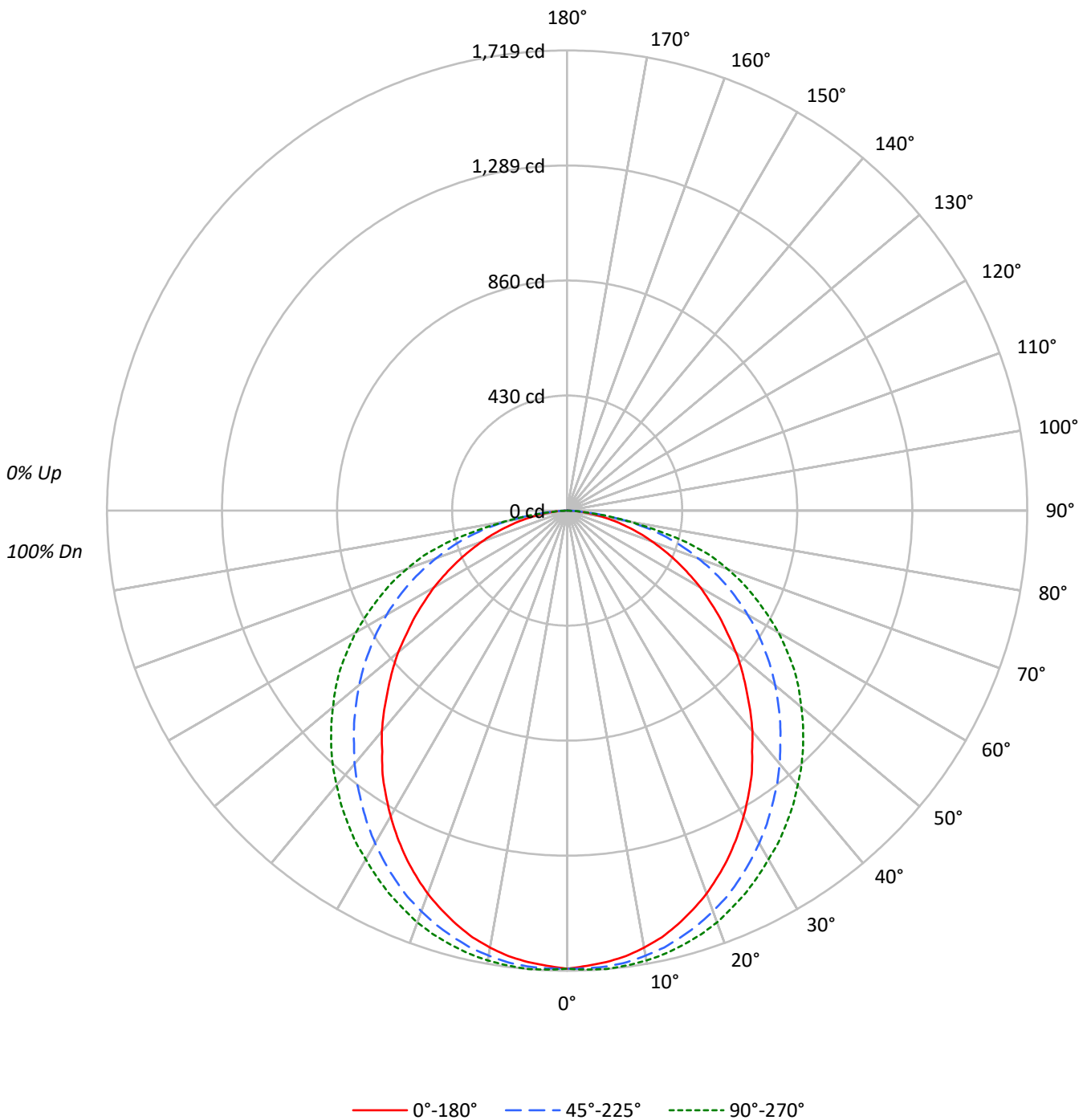
Input Watts (W): 44.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4606	4606	4606
5°	4573	4617	4642
10°	4531	4613	4664
15°	4457	4593	4678
20°	4362	4562	4688
25°	4240	4516	4681
30°	4097	4458	4675
35°	3950	4393	4691
40°	3782	4338	4705
45°	3602	4284	4744
50°	3446	4245	4780
55°	3262	4212	4855
60°	3091	4193	4906
65°	2888	4161	4946
70°	2653	4098	5013
75°	2393	3989	4836
80°	2055	3532	3640
85°	1652	2081	1652



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.3	3.3
10°-20°	463.9	9.5
20°-30°	696.8	14.2
30°-40°	831.0	17.0
40°-50°	859.2	17.5
50°-60°	789.9	16.1
60°-70°	628.9	12.8
70°-80°	384.2	7.8
80°-90°	83.5	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°	1323.0	27.0
0°-40°	2154.0	44.0
0°-60°	3803.1	77.6
0°-90°	4899.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4899.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1712	1712	1712	1712	1712	
5°	1693	1698	1709	1716	1719	161
15°	1600	1619	1649	1672	1679	451
25°	1428	1463	1521	1563	1577	657
35°	1202	1254	1337	1407	1428	750
45°	946	1014	1126	1216	1246	732
55°	695	772	898	1000	1035	622
65°	454	530	654	744	777	449
75°	230	298	384	451	465	245
85°	54	65	67	58	54	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1711.6	1711.6	1711.6	1711.6	1711.6
2.5°	1702.3	1704.6	1711.6	1716.2	1716.2
5°	1693.0	1697.6	1709.3	1716.2	1718.6
7.5°	1679.0	1686.0	1702.3	1711.6	1713.9
10°	1658.1	1667.4	1688.3	1702.3	1706.9
12.5°	1632.5	1646.5	1672.0	1690.7	1695.3
15°	1600.0	1618.6	1648.8	1672.0	1679.0
17.5°	1562.7	1586.0	1623.2	1651.1	1660.4
20°	1523.2	1546.5	1593.0	1625.5	1637.2
22.5°	1476.7	1506.9	1560.4	1597.6	1606.9
25°	1427.9	1462.8	1520.9	1562.7	1576.7
27.5°	1374.4	1416.2	1479.0	1530.2	1541.8
30°	1318.6	1362.8	1434.8	1490.7	1504.6
32.5°	1260.4	1311.6	1388.3	1451.1	1469.7
35°	1202.3	1253.5	1337.2	1406.9	1427.9
37.5°	1134.9	1195.3	1288.3	1360.4	1386.0
40°	1076.7	1134.9	1234.9	1313.9	1339.5
42.5°	1011.6	1074.4	1179.0	1265.1	1295.3
45°	946.5	1013.9	1125.6	1216.2	1246.5
47.5°	886.0	953.5	1069.7	1165.1	1195.3
50°	823.2	893.0	1013.9	1111.6	1141.8
52.5°	755.8	832.5	958.1	1055.8	1090.7
55°	695.3	772.1	897.7	1000.0	1034.9
57.5°	632.5	711.6	841.8	939.5	972.1
60°	574.4	651.1	779.0	874.4	911.6
62.5°	511.6	590.7	716.3	809.3	844.2
65°	453.5	530.2	653.5	744.2	776.7
67.5°	395.3	472.1	588.4	674.4	711.6
70°	337.2	413.9	520.9	604.6	637.2
72.5°	286.0	353.5	455.8	532.5	562.8
75°	230.2	297.7	383.7	451.2	465.1
77.5°	179.1	239.5	311.6	341.9	346.5
80°	132.6	179.1	227.9	234.9	234.9
82.5°	88.4	123.3	141.9	144.2	141.9
85°	53.5	65.1	67.4	58.1	53.5
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)