

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: P388972

Luminaire Tested: **24CZ2-65-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: P388972
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-65-SQR-UNV-L935-CD1-SWPD1-U
Description: 2x4 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: 5270.2 lumens
Efficiency: N/A
Efficacy: 83.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

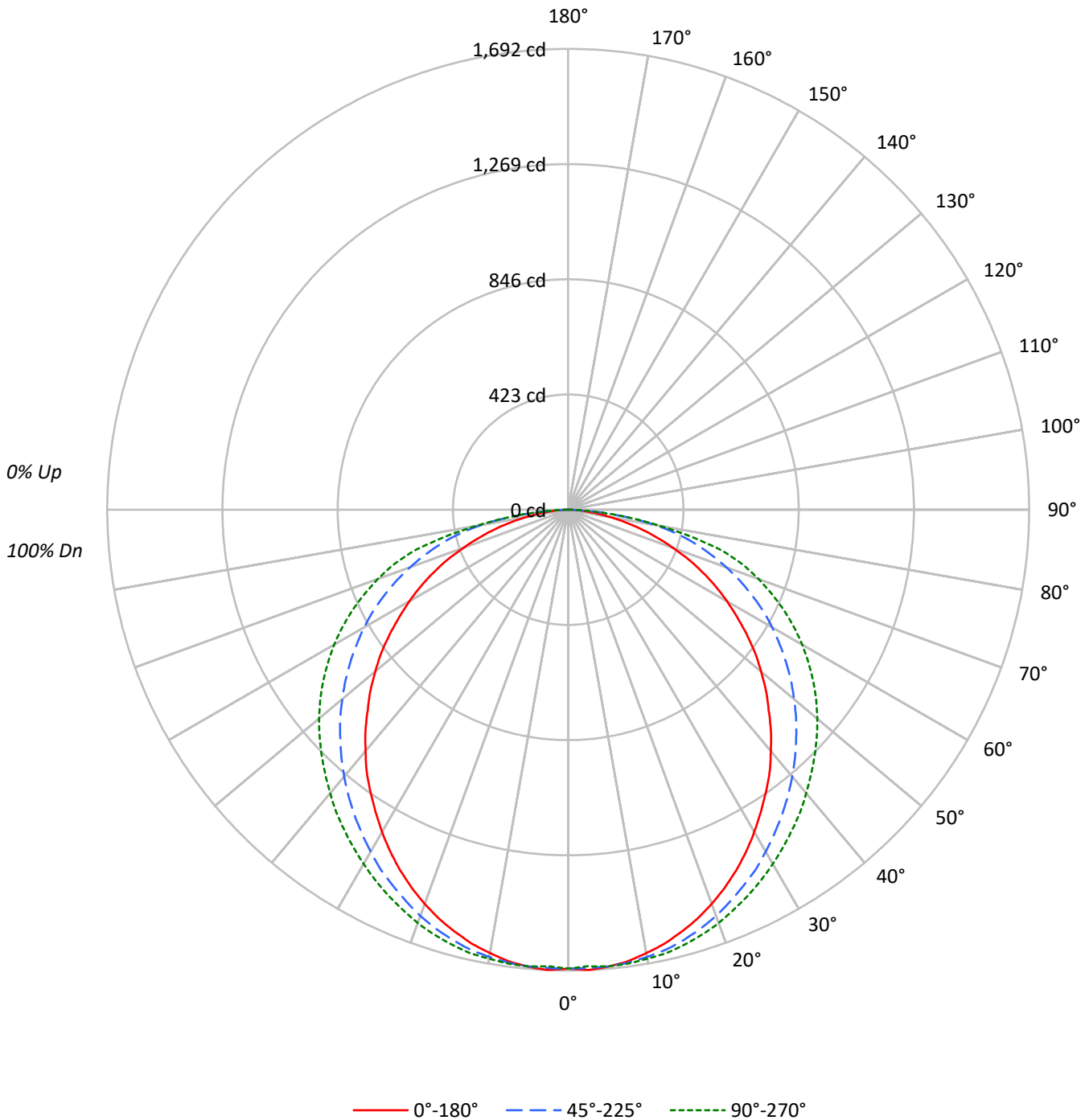
Input Watts (W): 62.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2267	2267	2267
5°	2275	2273	2273
10°	2259	2278	2287
15°	2235	2279	2303
20°	2205	2273	2312
25°	2168	2261	2320
30°	2122	2252	2333
35°	2078	2247	2355
40°	2033	2247	2387
45°	1980	2252	2434
50°	1934	2266	2499
55°	1878	2290	2576
60°	1812	2327	2669
65°	1734	2371	2781
70°	1609	2430	2923
75°	1457	2515	3058
80°	1227	2521	2630
85°	940	1908	1908



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	159.9	3.0
10°-20°	460.1	8.7
20°-30°	698.8	13.3
30°-40°	850.0	16.1
40°-50°	905.0	17.2
50°-60°	862.0	16.4
60°-70°	720.8	13.7
70°-80°	480.6	9.1
80°-90°	133.0	2.5
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°	1318.8	25.0
0°-40°	2168.8	41.2
0°-60°	3935.8	74.7
0°-90°	5270.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5270.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1685	1685	1685	1685	1685	
5°	1685	1674	1683	1683	1683	160
15°	1605	1608	1636	1648	1653	453
25°	1460	1479	1523	1549	1563	672
35°	1265	1302	1368	1413	1434	792
45°	1041	1096	1183	1250	1279	805
55°	800	870	976	1062	1098	716
65°	545	625	745	837	874	538
75°	280	369	484	566	588	297
85°	61	113	124	122	124	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1684.6	1684.6	1684.6	1684.6	1684.6
2.5°	1691.6	1679.4	1684.6	1684.6	1677.7
5°	1684.6	1674.2	1682.9	1682.9	1682.9
7.5°	1672.4	1663.7	1677.7	1681.1	1681.1
10°	1653.3	1649.8	1667.2	1672.4	1674.2
12.5°	1632.4	1630.7	1655.0	1662.0	1667.2
15°	1604.6	1608.0	1635.9	1648.1	1653.3
17.5°	1575.0	1581.9	1613.3	1630.7	1635.9
20°	1540.2	1550.6	1587.2	1604.6	1615.0
22.5°	1501.9	1517.5	1555.8	1576.7	1588.9
25°	1460.1	1479.3	1522.8	1548.9	1562.8
27.5°	1414.9	1439.2	1489.7	1519.3	1533.2
30°	1366.1	1394.0	1449.7	1484.5	1501.9
32.5°	1315.7	1348.7	1409.6	1447.9	1468.8
35°	1265.2	1301.7	1367.9	1413.1	1434.0
37.5°	1214.7	1251.3	1324.4	1373.1	1399.2
40°	1157.3	1200.8	1279.1	1333.1	1359.2
42.5°	1101.6	1148.6	1232.1	1291.3	1319.1
45°	1040.7	1096.4	1183.4	1249.5	1279.1
47.5°	985.0	1040.7	1134.7	1204.3	1237.4
50°	924.1	983.3	1082.5	1159.0	1193.8
52.5°	864.9	925.8	1030.3	1112.1	1146.9
55°	800.5	870.2	976.3	1061.6	1098.1
57.5°	736.1	811.0	920.6	1009.4	1045.9
60°	673.5	750.1	864.9	953.7	992.0
62.5°	610.8	687.4	807.5	898.0	934.5
65°	544.7	624.8	744.8	837.1	873.6
67.5°	478.6	562.1	682.2	774.4	809.2
70°	409.0	497.7	617.8	708.3	743.1
72.5°	344.6	433.3	551.7	640.4	673.5
75°	280.2	368.9	483.8	565.6	588.2
77.5°	217.5	306.3	409.0	462.9	468.1
80°	158.4	241.9	325.4	341.1	339.4
82.5°	106.2	181.0	224.5	226.2	231.5
85°	60.9	113.1	123.6	121.8	123.6
87.5°	24.4	40.0	34.8	26.1	26.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)