

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: P389064

Luminaire Tested: **24CZ2-70VHE-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: P389064
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: 24CZ2-70VHE-SQR-UNV-L930-CD1-SDWPD1-U
Description: 2x4 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: 5457.4 lumens
Efficiency: N/A
Efficacy: 119.4 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

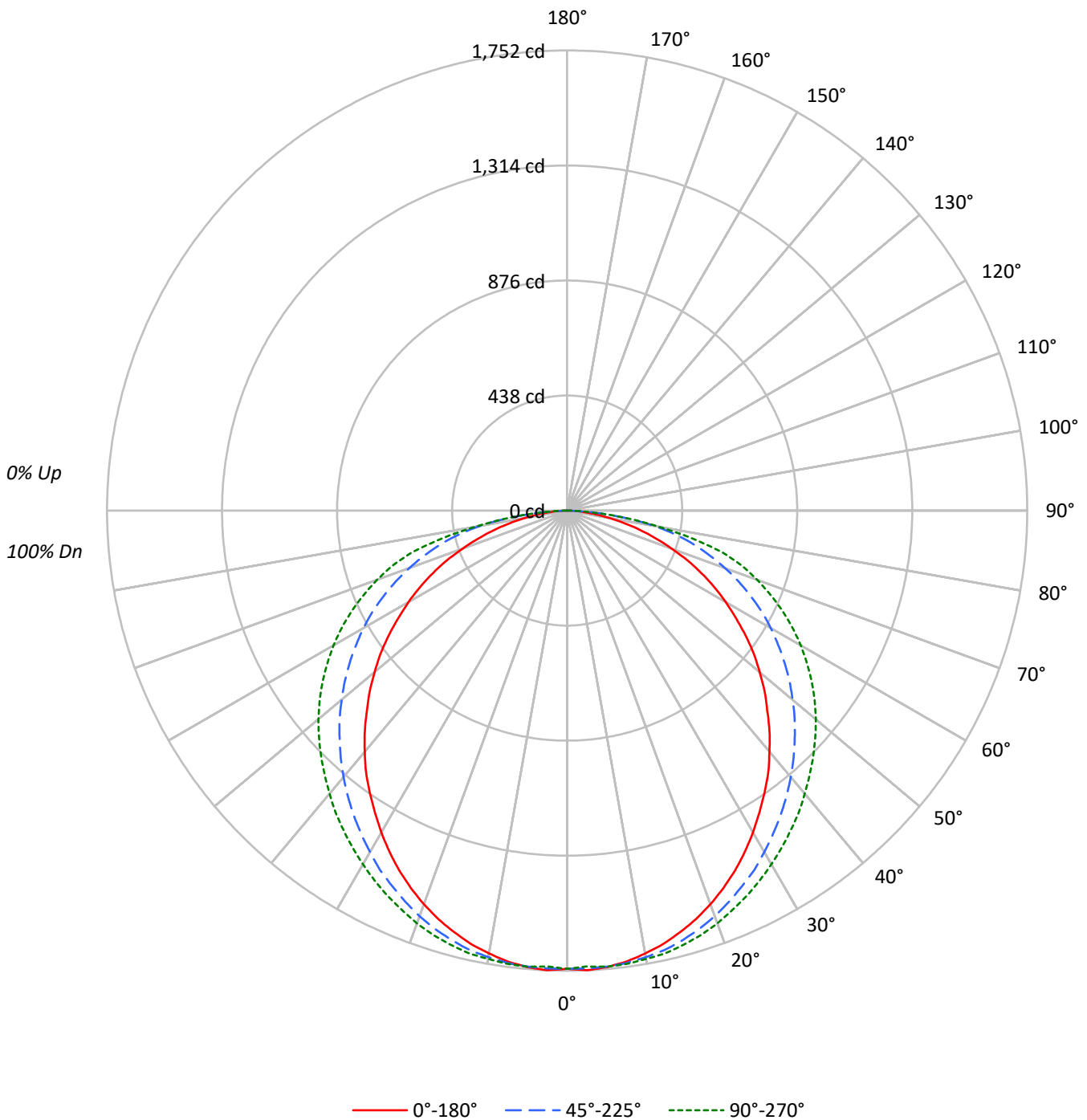
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P389064

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L930-CD1-SDWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P389064

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L930-CD1-SDWPD1-U

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°	2347	2347	2347
5°	2356	2354	2354
10°	2339	2359	2369
15°	2315	2360	2385
20°	2284	2353	2395
25°	2245	2341	2403
30°	2198	2332	2416
35°	2152	2327	2439
40°	2105	2327	2472
45°	2051	2332	2520
50°	2003	2346	2588
55°	1945	2372	2667
60°	1877	2410	2764
65°	1796	2456	2880
70°	1666	2517	3027
75°	1508	2604	3166
80°	1271	2611	2723
85°	974	1976	1976



TEST NUMBER: P389064

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L930-CD1-SDWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	165.6	3.0
10°-20°	476.4	8.7
20°-30°	723.6	13.3
30°-40°	880.2	16.1
40°-50°	937.1	17.2
50°-60°	892.6	16.4
60°-70°	746.4	13.7
70°-80°	497.7	9.1
80°-90°	137.7	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°	1365.6	25.0
0°-40°	2245.9	41.2
0°-60°	4075.6	74.7
0°-90°	5457.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5457.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1744	1744	1744	1744	1744	
5°	1744	1734	1743	1743	1743	165
15°	1662	1665	1694	1707	1712	469
25°	1512	1532	1577	1604	1618	696
35°	1310	1348	1416	1463	1485	820
45°	1078	1135	1225	1294	1325	833
55°	829	901	1011	1099	1137	741
65°	564	647	771	867	905	557
75°	290	382	501	586	609	307
85°	63	117	128	126	128	76
90°	0	0	0	0	0	



TEST NUMBER: P389064

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L930-CD1-SDWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1744.5	1744.5	1744.5	1744.5	1744.5
2.5°	1751.7	1739.0	1744.5	1744.5	1737.2
5°	1744.5	1733.6	1742.6	1742.6	1742.6
7.5°	1731.8	1722.8	1737.2	1740.8	1740.8
10°	1712.0	1708.4	1726.4	1731.8	1733.6
12.5°	1690.4	1688.6	1713.8	1721.0	1726.4
15°	1661.6	1665.2	1694.0	1706.6	1712.0
17.5°	1630.9	1638.1	1670.6	1688.6	1694.0
20°	1594.9	1605.7	1643.5	1661.6	1672.4
22.5°	1555.2	1571.4	1611.1	1632.7	1645.3
25°	1512.0	1531.8	1576.9	1603.9	1618.3
27.5°	1465.1	1490.4	1542.6	1573.2	1587.7
30°	1414.7	1443.5	1501.2	1537.2	1555.2
32.5°	1362.4	1396.6	1459.7	1499.4	1521.0
35°	1310.1	1348.0	1416.5	1463.3	1484.9
37.5°	1257.9	1295.7	1371.4	1421.9	1448.9
40°	1198.4	1243.5	1324.6	1380.4	1407.5
42.5°	1140.7	1189.4	1275.9	1337.2	1366.0
45°	1077.7	1135.3	1225.4	1293.9	1324.6
47.5°	1020.0	1077.7	1175.0	1247.1	1281.3
50°	956.9	1018.2	1120.9	1200.2	1236.3
52.5°	895.7	958.7	1066.9	1151.6	1187.6
55°	829.0	901.1	1011.0	1099.3	1137.1
57.5°	762.3	839.8	953.3	1045.2	1083.1
60°	697.4	776.7	895.7	987.6	1027.2
62.5°	632.5	711.8	836.2	929.9	967.7
65°	564.1	647.0	771.3	866.8	904.7
67.5°	495.6	582.1	706.4	801.9	838.0
70°	423.5	515.4	639.8	733.5	769.5
72.5°	356.8	448.7	571.3	663.2	697.4
75°	290.1	382.0	501.0	585.7	609.1
77.5°	225.3	317.2	423.5	479.4	484.8
80°	164.0	250.5	337.0	353.2	351.4
82.5°	109.9	187.4	232.5	234.3	239.7
85°	63.1	117.1	128.0	126.1	128.0
87.5°	25.2	41.4	36.0	27.0	27.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)