

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: P389045

Luminaire Tested: **24CZ2-70HE-SQR-UNV-L935-CD1-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: P389045
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: 24CZ2-70HE-SQR-UNV-L935-CD1-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: 5698.5 lumens
Efficiency: N/A
Efficacy: 111.7 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

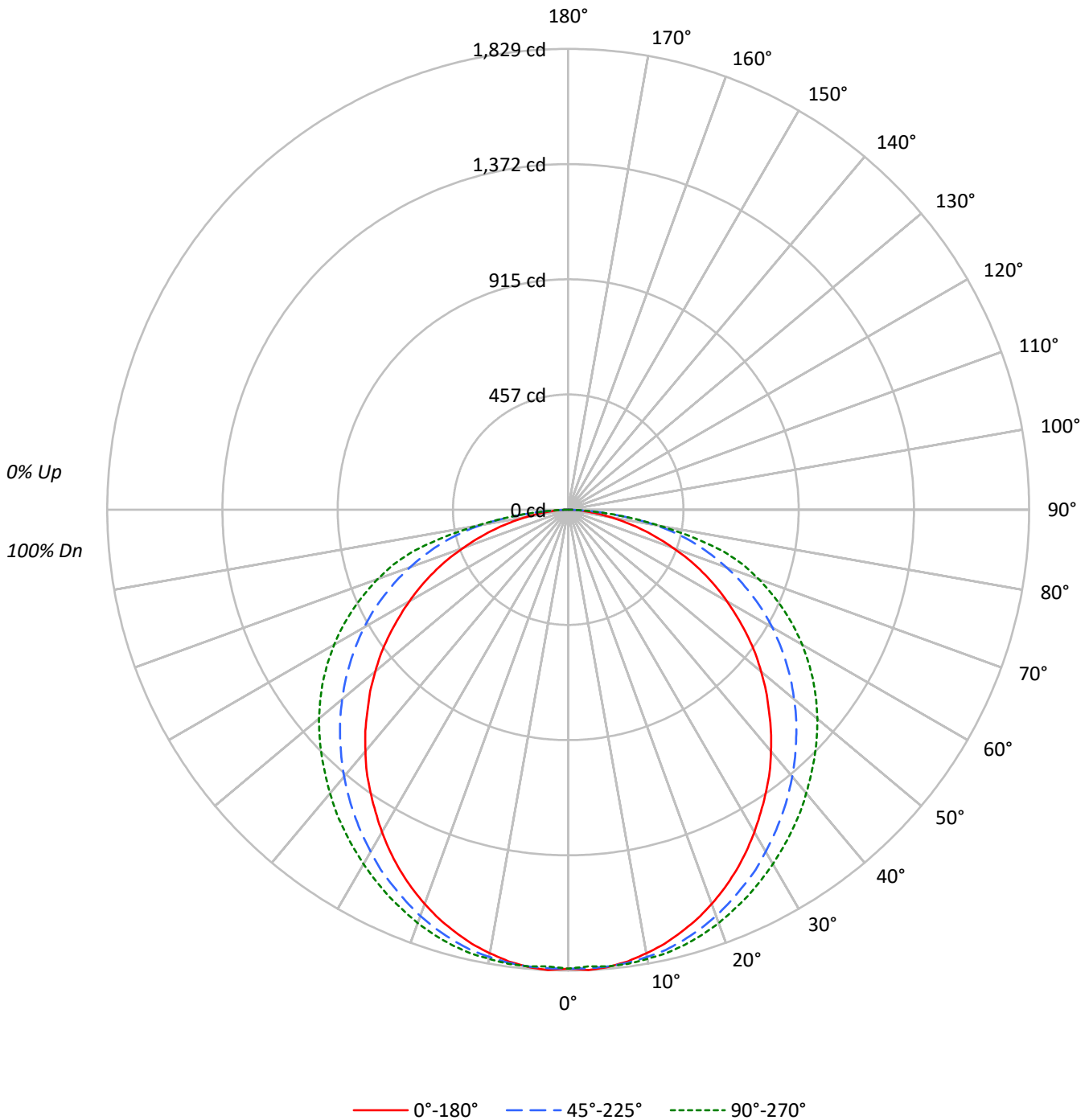
Input Watts (W): 51
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P389045

CATALOG NUMBER: 24CZ2-70HE-SQR-UNV-L935-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P389045

CATALOG NUMBER: 24CZ2-70HE-SQR-UNV-L935-CD1-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°	2451	2451	2451
5°	2460	2458	2458
10°	2442	2463	2473
15°	2417	2464	2490
20°	2384	2457	2500
25°	2344	2444	2509
30°	2295	2435	2523
35°	2247	2429	2547
40°	2198	2429	2581
45°	2141	2435	2632
50°	2092	2450	2702
55°	2031	2476	2785
60°	1960	2517	2886
65°	1875	2564	3007
70°	1740	2628	3161
75°	1575	2719	3306
80°	1327	2727	2843
85°	1017	2062	2062



TEST NUMBER: P389045

CATALOG NUMBER: 24CZ2-70HE-SQR-UNV-L935-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	172.9	3.0
10°-20°	497.5	8.7
20°-30°	755.6	13.3
30°-40°	919.1	16.1
40°-50°	978.5	17.2
50°-60°	932.0	16.4
60°-70°	779.4	13.7
70°-80°	519.7	9.1
80°-90°	143.8	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°	1426.0	25.0
0°-40°	2345.1	41.2
0°-60°	4255.6	74.7
0°-90°	5698.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5698.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1822	1822	1822	1822	1822	
5°	1822	1810	1820	1820	1820	173
15°	1735	1739	1769	1782	1788	489
25°	1579	1600	1646	1675	1690	727
35°	1368	1408	1479	1528	1550	856
45°	1125	1186	1280	1351	1383	870
55°	866	941	1056	1148	1187	774
65°	589	676	805	905	945	582
75°	303	399	523	612	636	321
85°	66	122	134	132	134	80
90°	0	0	0	0	0	



TEST NUMBER: P389045

CATALOG NUMBER: 24CZ2-70HE-SQR-UNV-L935-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1821.5	1821.5	1821.5	1821.5	1821.5
2.5°	1829.0	1815.9	1821.5	1821.5	1814.0
5°	1821.5	1810.2	1819.6	1819.6	1819.6
7.5°	1808.3	1798.9	1814.0	1817.8	1817.8
10°	1787.6	1783.9	1802.7	1808.3	1810.2
12.5°	1765.1	1763.2	1789.5	1797.1	1802.7
15°	1735.0	1738.7	1768.8	1782.0	1787.6
17.5°	1703.0	1710.5	1744.4	1763.2	1768.8
20°	1665.3	1676.6	1716.1	1735.0	1746.2
22.5°	1623.9	1640.9	1682.3	1704.9	1718.0
25°	1578.8	1599.5	1646.5	1674.7	1689.8
27.5°	1529.8	1556.2	1610.8	1642.8	1657.8
30°	1477.2	1507.3	1567.5	1605.1	1623.9
32.5°	1422.6	1458.3	1524.2	1565.6	1588.2
35°	1368.0	1407.5	1479.0	1528.0	1550.5
37.5°	1313.4	1353.0	1432.0	1484.7	1512.9
40°	1251.4	1298.4	1383.1	1441.4	1469.6
42.5°	1191.1	1241.9	1332.3	1396.2	1426.4
45°	1125.3	1185.5	1279.6	1351.1	1383.1
47.5°	1065.1	1125.3	1226.9	1302.2	1337.9
50°	999.2	1063.2	1170.4	1253.2	1290.9
52.5°	935.2	1001.1	1114.0	1202.4	1240.1
55°	865.6	940.9	1055.7	1147.9	1187.4
57.5°	796.0	876.9	995.4	1091.4	1130.9
60°	728.2	811.0	935.2	1031.2	1072.6
62.5°	660.5	743.3	873.1	971.0	1010.5
65°	589.0	675.5	805.4	905.1	944.6
67.5°	517.5	607.8	737.6	837.4	875.0
70°	442.2	538.2	668.0	765.9	803.5
72.5°	372.6	468.6	596.5	692.5	728.2
75°	303.0	398.9	523.1	611.6	636.0
77.5°	235.2	331.2	442.2	500.5	506.2
80°	171.2	261.6	351.9	368.8	366.9
82.5°	114.8	195.7	242.7	244.6	250.3
85°	65.9	122.3	133.6	131.7	133.6
87.5°	26.3	43.3	37.6	28.2	28.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)