

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: P389069

Luminaire Tested: **24CZ2-70VHE-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: P389069
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-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: 5731.8 lumens
Efficiency: N/A
Efficacy: 125.4 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

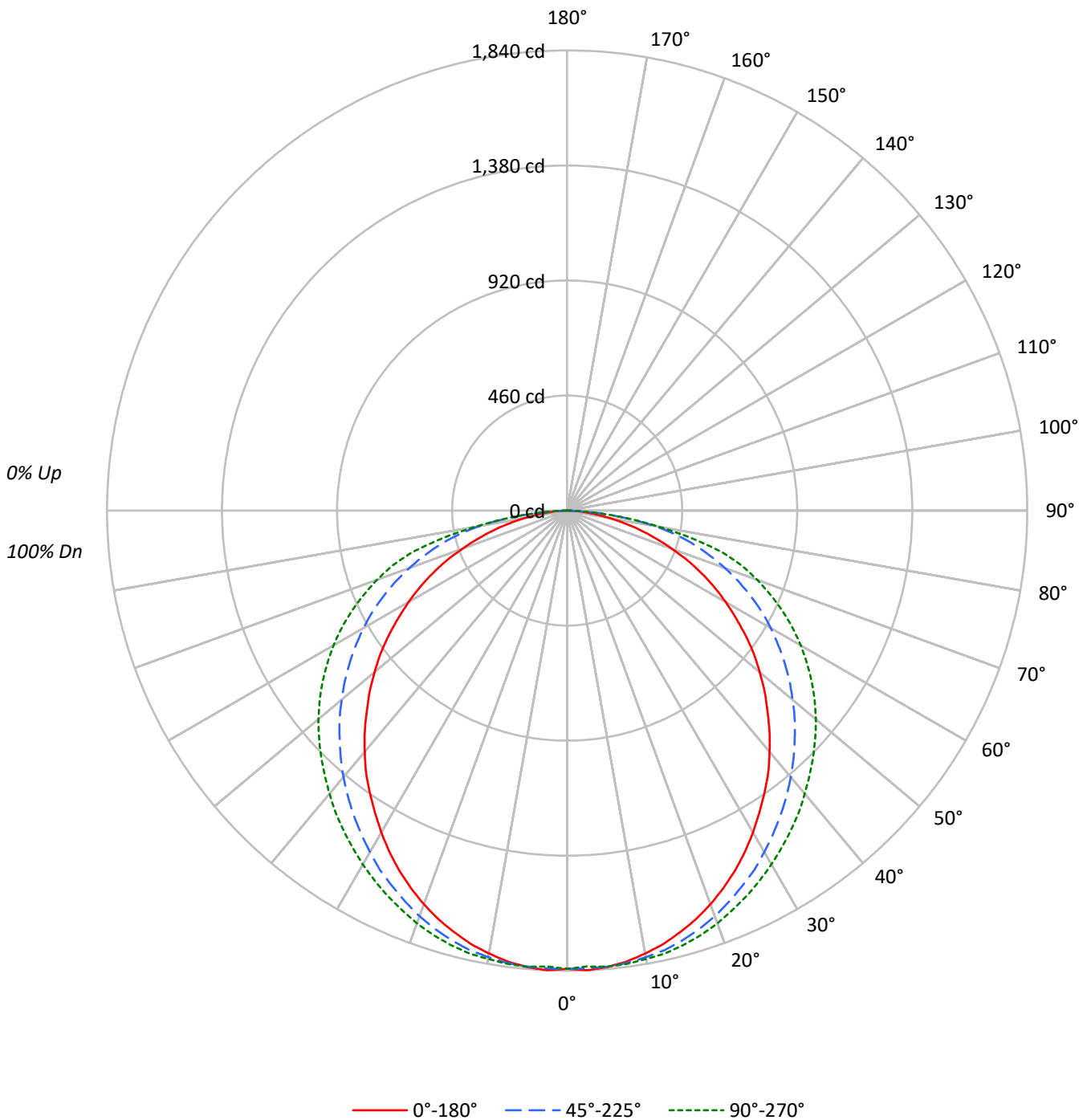
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2465	2465	2465
5°	2475	2472	2472
10°	2457	2477	2488
15°	2431	2478	2505
20°	2398	2472	2515
25°	2358	2459	2523
30°	2308	2449	2538
35°	2260	2444	2562
40°	2211	2444	2596
45°	2154	2449	2647
50°	2104	2464	2718
55°	2042	2491	2802
60°	1971	2531	2903
65°	1886	2579	3025
70°	1750	2643	3179
75°	1584	2735	3326
80°	1334	2742	2860
85°	1022	2075	2075



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	173.9	3.0
10°-20°	500.4	8.7
20°-30°	760.0	13.3
30°-40°	924.5	16.1
40°-50°	984.3	17.2
50°-60°	937.5	16.4
60°-70°	784.0	13.7
70°-80°	522.7	9.1
80°-90°	144.6	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°	1434.3	25.0
0°-40°	2358.8	41.2
0°-60°	4280.5	74.7
0°-90°	5731.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5731.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1832	1832	1832	1832	1832	
5°	1832	1821	1830	1830	1830	174
15°	1745	1749	1779	1792	1798	492
25°	1588	1609	1656	1684	1700	731
35°	1376	1416	1488	1537	1560	861
45°	1132	1192	1287	1359	1391	875
55°	871	946	1062	1155	1194	778
65°	592	680	810	910	950	585
75°	305	401	526	615	640	323
85°	66	123	134	132	134	80
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1832.2	1832.2	1832.2	1832.2	1832.2
2.5°	1839.7	1826.5	1832.2	1832.2	1824.6
5°	1832.2	1820.8	1830.3	1830.3	1830.3
7.5°	1818.9	1809.4	1824.6	1828.4	1828.4
10°	1798.1	1794.3	1813.2	1818.9	1820.8
12.5°	1775.4	1773.5	1800.0	1807.6	1813.2
15°	1745.1	1748.9	1779.2	1792.4	1798.1
17.5°	1712.9	1720.5	1754.6	1773.5	1779.2
20°	1675.1	1686.4	1726.2	1745.1	1756.5
22.5°	1633.4	1650.5	1692.1	1714.8	1728.1
25°	1588.0	1608.8	1656.1	1684.5	1699.7
27.5°	1538.8	1565.3	1620.2	1652.4	1667.5
30°	1485.8	1516.1	1576.6	1614.5	1633.4
32.5°	1430.9	1466.9	1533.1	1574.8	1597.5
35°	1376.0	1415.8	1487.7	1536.9	1559.6
37.5°	1321.1	1360.9	1440.4	1493.4	1521.8
40°	1258.7	1306.0	1391.2	1449.8	1478.2
42.5°	1198.1	1249.2	1340.1	1404.4	1434.7
45°	1131.9	1192.4	1287.1	1359.0	1391.2
47.5°	1071.3	1131.9	1234.1	1309.8	1345.7
50°	1005.0	1069.4	1177.3	1260.6	1298.4
52.5°	940.7	1006.9	1120.5	1209.5	1247.3
55°	870.7	946.4	1061.8	1154.6	1194.3
57.5°	800.6	882.0	1001.3	1097.8	1137.5
60°	732.5	815.8	940.7	1037.2	1078.9
62.5°	664.3	747.6	878.2	976.6	1016.4
65°	592.4	679.5	810.1	910.4	950.2
67.5°	520.5	611.4	741.9	842.3	880.1
70°	444.8	541.3	671.9	770.3	808.2
72.5°	374.8	471.3	600.0	696.5	732.5
75°	304.7	401.3	526.2	615.1	639.7
77.5°	236.6	333.1	444.8	503.5	509.1
80°	172.2	263.1	353.9	371.0	369.1
82.5°	115.5	196.8	244.2	246.1	251.7
85°	66.2	123.0	134.4	132.5	134.4
87.5°	26.5	43.5	37.9	28.4	28.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)