

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: P389165

Luminaire Tested: **24CZ2-85VHE-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: P389165
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: 24CZ2-85VHE-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: 6983.1 lumens
Efficiency: N/A
Efficacy: 120.6 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

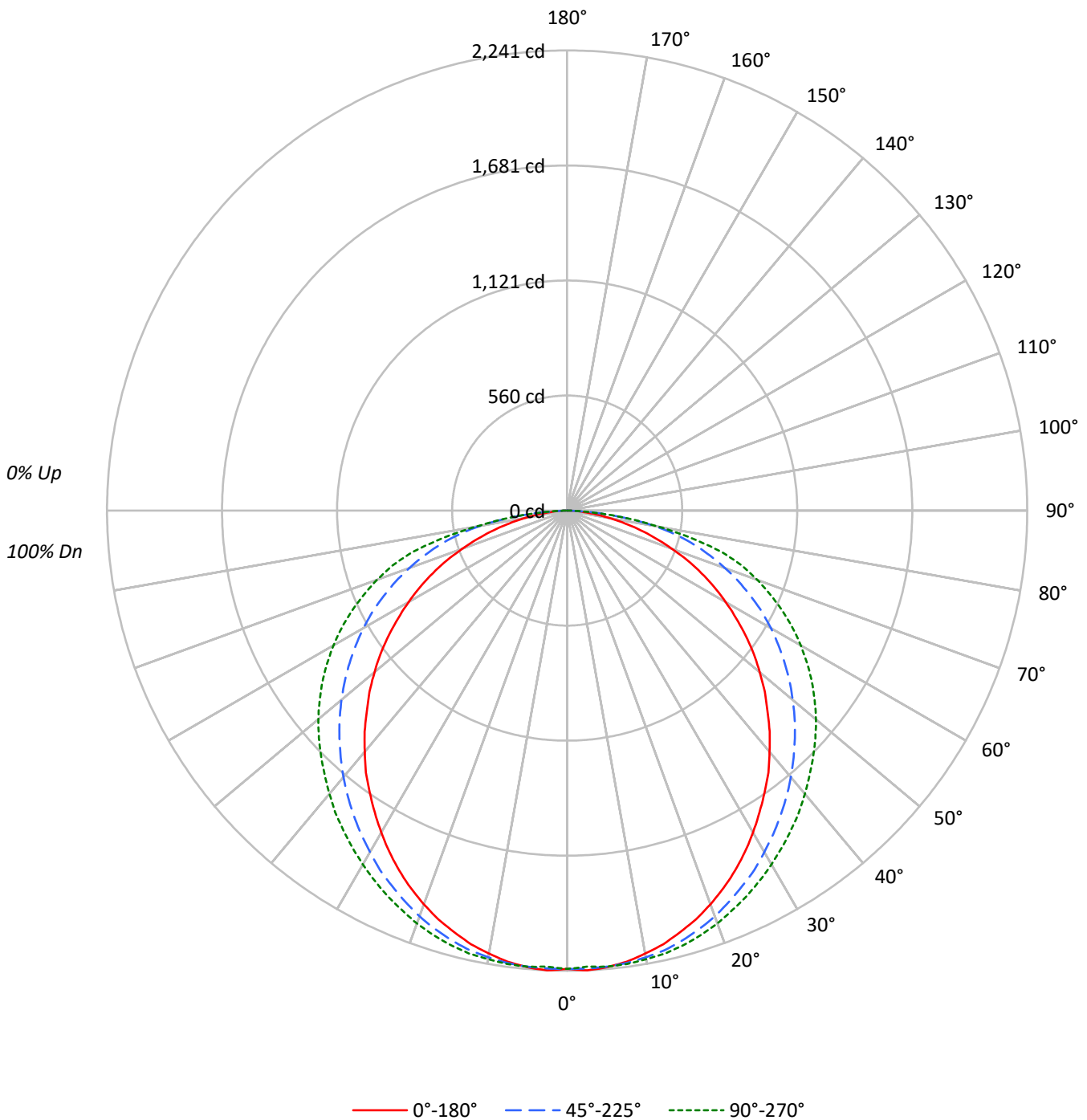
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3003	3003	3003
5°	3015	3012	3012
10°	2993	3018	3031
15°	2962	3019	3051
20°	2922	3011	3064
25°	2872	2995	3074
30°	2812	2984	3092
35°	2754	2977	3121
40°	2693	2977	3163
45°	2624	2984	3225
50°	2563	3002	3311
55°	2488	3035	3413
60°	2401	3084	3537
65°	2298	3142	3685
70°	2132	3220	3873
75°	1930	3332	4052
80°	1626	3341	3484
85°	1246	2527	2527



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	211.9	3.0
10°-20°	609.6	8.7
20°-30°	926.0	13.3
30°-40°	1126.3	16.1
40°-50°	1199.1	17.2
50°-60°	1142.1	16.4
60°-70°	955.1	13.7
70°-80°	636.8	9.1
80°-90°	176.2	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°	1747.4	25.0
0°-40°	2873.7	41.2
0°-60°	5215.0	74.7
0°-90°	6983.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6983.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2232	2232	2232	2232	2232	
5°	2232	2218	2230	2230	2230	212
15°	2126	2131	2168	2184	2191	600
25°	1935	1960	2018	2052	2071	891
35°	1676	1725	1812	1872	1900	1049
45°	1379	1453	1568	1656	1695	1066
55°	1061	1153	1294	1407	1455	948
65°	722	828	987	1109	1158	713
75°	371	489	641	749	779	393
85°	81	150	164	161	164	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2232.1	2232.1	2232.1	2232.1	2232.1
2.5°	2241.4	2225.2	2232.1	2232.1	2222.9
5°	2232.1	2218.3	2229.8	2229.8	2229.8
7.5°	2216.0	2204.5	2222.9	2227.5	2227.5
10°	2190.6	2186.0	2209.1	2216.0	2218.3
12.5°	2163.0	2160.7	2192.9	2202.2	2209.1
15°	2126.1	2130.7	2167.6	2183.7	2190.6
17.5°	2086.9	2096.1	2137.6	2160.7	2167.6
20°	2040.7	2054.6	2103.0	2126.1	2139.9
22.5°	1990.0	2010.8	2061.5	2089.2	2105.3
25°	1934.7	1960.0	2017.7	2052.3	2070.7
27.5°	1874.7	1907.0	1973.9	2013.1	2031.5
30°	1810.2	1847.0	1920.8	1967.0	1990.0
32.5°	1743.3	1787.1	1867.8	1918.5	1946.2
35°	1676.4	1724.8	1812.5	1872.4	1900.1
37.5°	1609.5	1658.0	1754.8	1819.4	1854.0
40°	1533.4	1591.1	1694.9	1766.3	1800.9
42.5°	1459.7	1521.9	1632.6	1711.0	1747.9
45°	1378.9	1452.7	1568.0	1655.7	1694.9
47.5°	1305.2	1378.9	1503.5	1595.7	1639.5
50°	1224.4	1302.8	1434.3	1535.7	1581.9
52.5°	1146.0	1226.8	1365.1	1473.5	1519.6
55°	1060.7	1153.0	1293.6	1406.6	1455.0
57.5°	975.4	1074.6	1219.8	1337.4	1385.9
60°	892.4	993.9	1146.0	1263.6	1314.4
62.5°	809.4	910.8	1070.0	1189.9	1238.3
65°	721.8	827.8	986.9	1109.2	1157.6
67.5°	634.1	744.8	903.9	1026.1	1072.3
70°	541.9	659.5	818.6	938.5	984.6
72.5°	456.6	574.2	731.0	848.6	892.4
75°	371.3	488.9	641.0	749.4	779.4
77.5°	288.2	405.8	541.9	613.4	620.3
80°	209.8	320.5	431.2	452.0	449.7
82.5°	140.7	239.8	297.5	299.8	306.7
85°	80.7	149.9	163.7	161.4	163.7
87.5°	32.3	53.0	46.1	34.6	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)