

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: P389164

Luminaire Tested: **24CZ2-85VHE-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: P389164
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-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: 6896.4 lumens
Efficiency: N/A
Efficacy: 119.1 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

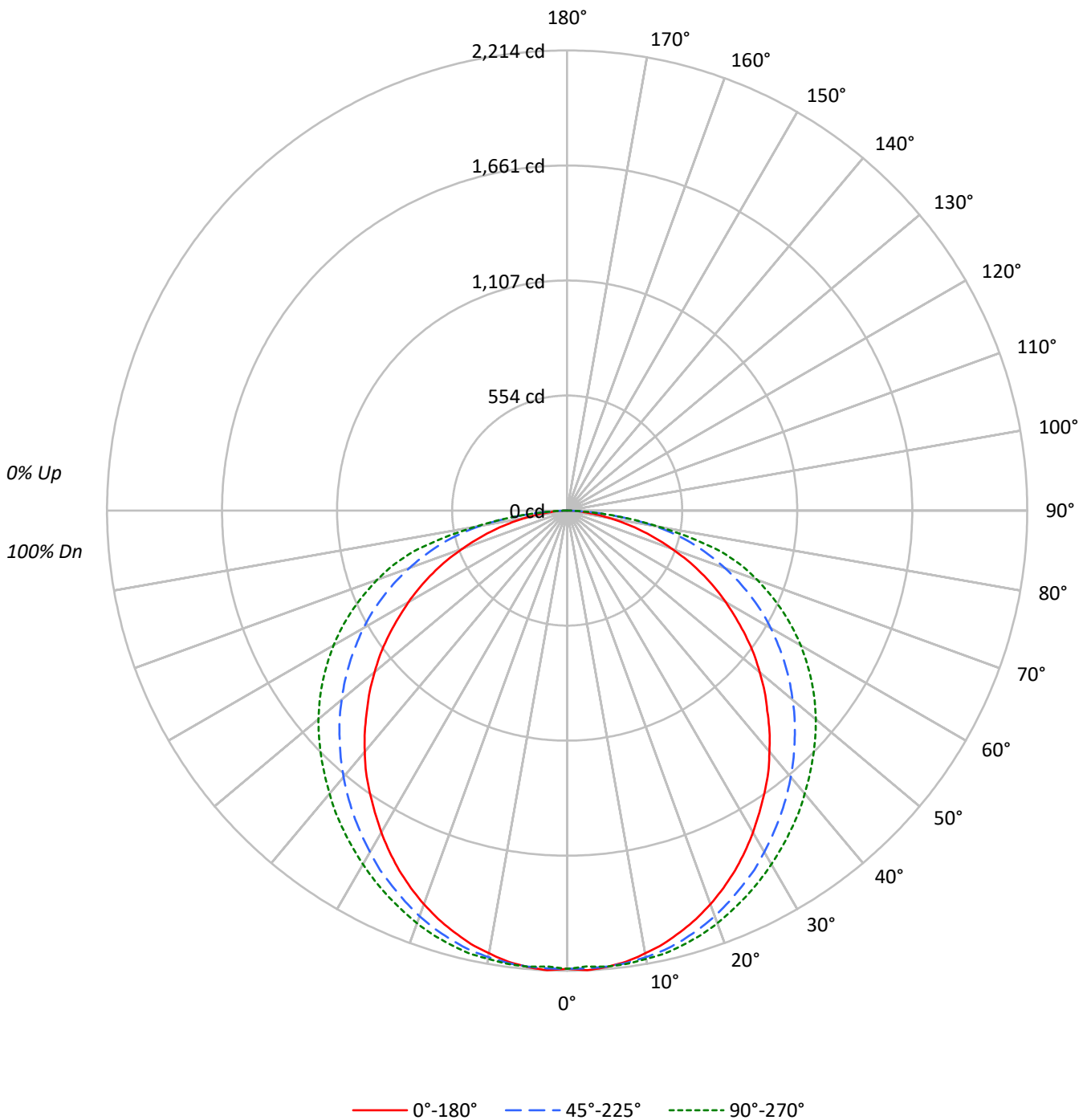
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2966	2966	2966
5°	2977	2974	2974
10°	2956	2981	2993
15°	2925	2982	3014
20°	2886	2974	3026
25°	2837	2958	3036
30°	2777	2947	3053
35°	2719	2940	3082
40°	2660	2940	3124
45°	2591	2947	3185
50°	2531	2965	3270
55°	2457	2997	3371
60°	2372	3046	3493
65°	2269	3103	3640
70°	2105	3180	3825
75°	1906	3291	4001
80°	1605	3300	3441
85°	1230	2496	2496



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	209.2	3.0
10°-20°	602.0	8.7
20°-30°	914.5	13.3
30°-40°	1112.3	16.1
40°-50°	1184.2	17.2
50°-60°	1127.9	16.4
60°-70°	943.3	13.7
70°-80°	628.9	9.1
80°-90°	174.0	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°	1725.7	25.0
0°-40°	2838.0	41.2
0°-60°	5150.2	74.7
0°-90°	6896.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6896.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2204	2204	2204	2204	2204	
5°	2204	2191	2202	2202	2202	209
15°	2100	2104	2141	2157	2163	592
25°	1911	1936	1993	2027	2045	880
35°	1656	1703	1790	1849	1876	1036
45°	1362	1435	1549	1635	1674	1053
55°	1048	1139	1278	1389	1437	936
65°	713	818	975	1095	1143	704
75°	367	483	633	740	770	388
85°	80	148	162	159	162	96
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2204.4	2204.4	2204.4	2204.4	2204.4
2.5°	2213.5	2197.6	2204.4	2204.4	2195.3
5°	2204.4	2190.8	2202.1	2202.1	2202.1
7.5°	2188.5	2177.1	2195.3	2199.9	2199.9
10°	2163.4	2158.9	2181.7	2188.5	2190.8
12.5°	2136.1	2133.8	2165.7	2174.8	2181.7
15°	2099.7	2104.2	2140.7	2156.6	2163.4
17.5°	2061.0	2070.1	2111.1	2133.8	2140.7
20°	2015.4	2029.1	2076.9	2099.7	2113.3
22.5°	1965.3	1985.8	2035.9	2063.2	2079.2
25°	1910.7	1935.7	1992.6	2026.8	2045.0
27.5°	1851.4	1883.3	1949.4	1988.1	2006.3
30°	1787.7	1824.1	1897.0	1942.5	1965.3
32.5°	1721.6	1764.9	1844.6	1894.7	1922.0
35°	1655.6	1703.4	1790.0	1849.2	1876.5
37.5°	1589.6	1637.4	1733.0	1796.8	1830.9
40°	1514.4	1571.3	1673.8	1744.4	1778.6
42.5°	1441.5	1503.0	1612.3	1689.8	1726.2
45°	1361.8	1434.7	1548.6	1635.1	1673.8
47.5°	1289.0	1361.8	1484.8	1575.9	1619.2
50°	1209.2	1286.7	1416.5	1516.7	1562.2
52.5°	1131.8	1211.5	1348.2	1455.2	1500.7
55°	1047.6	1138.6	1277.6	1389.2	1437.0
57.5°	963.3	1061.2	1204.7	1320.8	1368.7
60°	881.3	981.5	1131.8	1248.0	1298.1
62.5°	799.3	899.5	1056.7	1175.1	1222.9
65°	712.8	817.6	974.7	1095.4	1143.2
67.5°	626.3	735.6	892.7	1013.4	1058.9
70°	535.2	651.3	808.4	926.9	972.4
72.5°	450.9	567.0	721.9	838.0	881.3
75°	366.6	482.8	633.1	740.1	769.7
77.5°	284.7	400.8	535.2	605.8	612.6
80°	207.2	316.5	425.9	446.4	444.1
82.5°	138.9	236.8	293.8	296.0	302.9
85°	79.7	148.0	161.7	159.4	161.7
87.5°	31.9	52.4	45.5	34.2	34.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)