

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: P389141

Luminaire Tested: **24CZ2-80VHE-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: P389141
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: 24CZ2-80VHE-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: 6599.8 lumens
Efficiency: N/A
Efficacy: 122.7 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

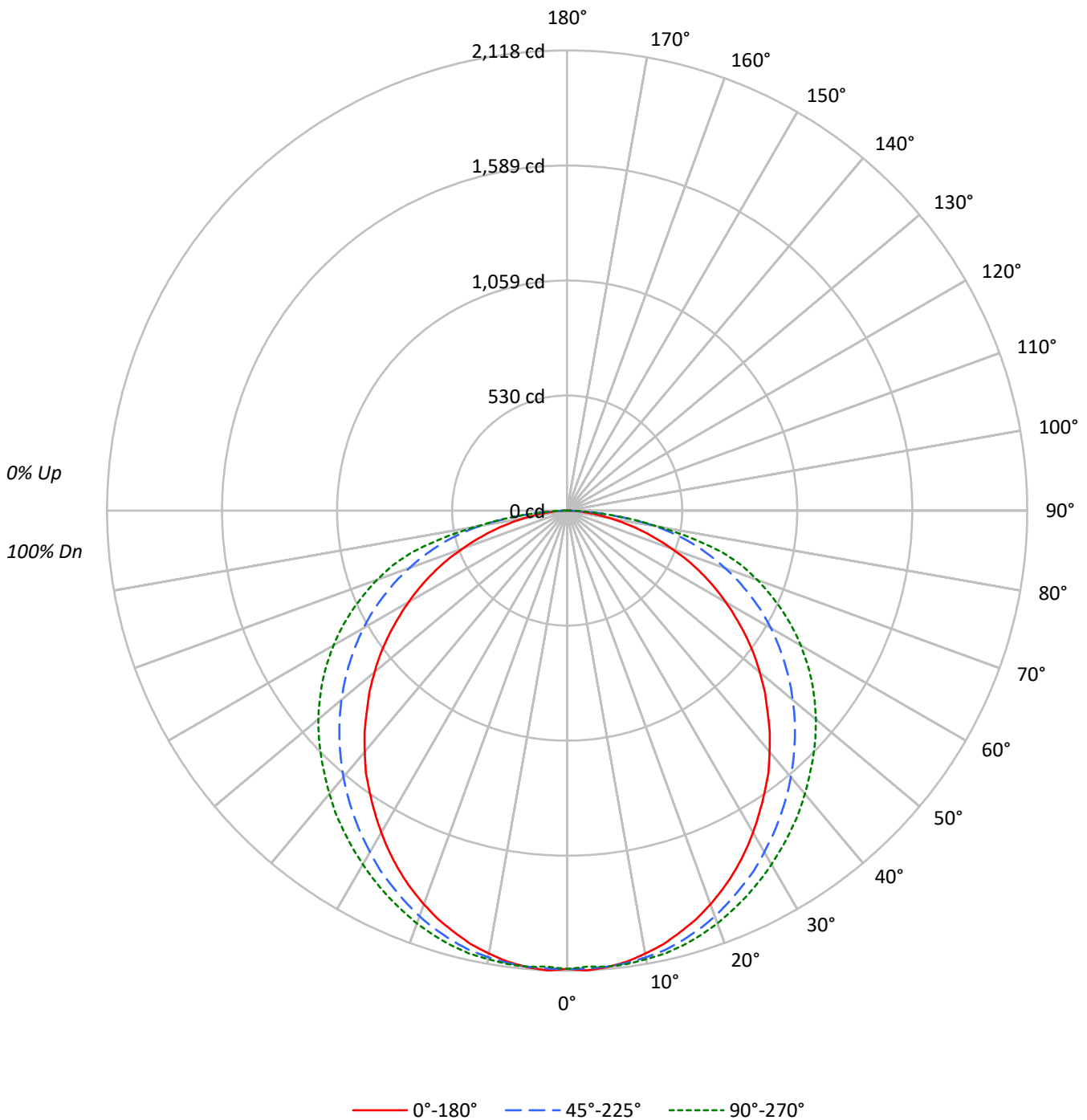
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2838	2838	2838
5°	2849	2846	2846
10°	2829	2852	2864
15°	2799	2854	2884
20°	2762	2846	2896
25°	2715	2831	2905
30°	2658	2820	2922
35°	2602	2814	2950
40°	2546	2813	2990
45°	2480	2820	3048
50°	2422	2838	3129
55°	2352	2868	3226
60°	2270	2915	3343
65°	2172	2970	3483
70°	2015	3044	3661
75°	1824	3150	3829
80°	1537	3157	3293
85°	1178	2388	2388



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.2	3.0
10°-20°	576.1	8.7
20°-30°	875.1	13.3
30°-40°	1064.5	16.1
40°-50°	1133.3	17.2
50°-60°	1079.4	16.4
60°-70°	902.7	13.7
70°-80°	601.8	9.1
80°-90°	166.5	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°	1651.5	25.0
0°-40°	2716.0	41.2
0°-60°	4928.7	74.7
0°-90°	6599.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6599.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2110	2110	2110	2110	2110	
5°	2110	2096	2107	2107	2107	200
15°	2009	2014	2049	2064	2070	567
25°	1828	1852	1907	1940	1957	842
35°	1584	1630	1713	1770	1796	991
45°	1303	1373	1482	1565	1602	1007
55°	1002	1090	1223	1329	1375	896
65°	682	782	933	1048	1094	674
75°	351	462	606	708	737	372
85°	76	142	155	153	155	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2109.6	2109.6	2109.6	2109.6	2109.6
2.5°	2118.3	2103.1	2109.6	2109.6	2100.9
5°	2109.6	2096.5	2107.4	2107.4	2107.4
7.5°	2094.4	2083.5	2100.9	2105.3	2105.3
10°	2070.4	2066.0	2087.8	2094.4	2096.5
12.5°	2044.2	2042.1	2072.6	2081.3	2087.8
15°	2009.4	2013.7	2048.6	2063.9	2070.4
17.5°	1972.3	1981.0	2020.3	2042.1	2048.6
20°	1928.7	1941.8	1987.6	2009.4	2022.4
22.5°	1880.8	1900.4	1948.3	1974.5	1989.8
25°	1828.5	1852.5	1906.9	1939.6	1957.1
27.5°	1771.8	1802.3	1865.5	1902.6	1920.0
30°	1710.8	1745.7	1815.4	1859.0	1880.8
32.5°	1647.6	1689.0	1765.3	1813.2	1839.4
35°	1584.4	1630.2	1713.0	1769.6	1795.8
37.5°	1521.2	1567.0	1658.5	1719.5	1752.2
40°	1449.3	1503.8	1601.8	1669.4	1702.1
42.5°	1379.5	1438.4	1543.0	1617.1	1652.0
45°	1303.3	1373.0	1482.0	1564.8	1601.8
47.5°	1233.5	1303.3	1420.9	1508.1	1549.5
50°	1157.2	1231.3	1355.6	1451.5	1495.0
52.5°	1083.1	1159.4	1290.2	1392.6	1436.2
55°	1002.5	1089.7	1222.6	1329.4	1375.2
57.5°	921.9	1015.6	1152.9	1264.0	1309.8
60°	843.4	939.3	1083.1	1194.3	1242.2
62.5°	765.0	860.8	1011.2	1124.5	1170.3
65°	682.1	782.4	932.8	1048.3	1094.0
67.5°	599.3	703.9	854.3	969.8	1013.4
70°	512.1	623.3	773.7	887.0	930.6
72.5°	431.5	542.7	690.9	802.0	843.4
75°	350.9	462.0	605.9	708.3	736.6
77.5°	272.4	383.6	512.1	579.7	586.2
80°	198.3	302.9	407.5	427.2	425.0
82.5°	132.9	226.7	281.1	283.3	289.9
85°	76.3	141.7	154.7	152.6	154.7
87.5°	30.5	50.1	43.6	32.7	32.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)