

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: P389146

Luminaire Tested: **24CZ2-80VHE-SQR-UNV-L950-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: P389146
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-L950-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6989.9 lumens
Efficiency: N/A
Efficacy: 129.9 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

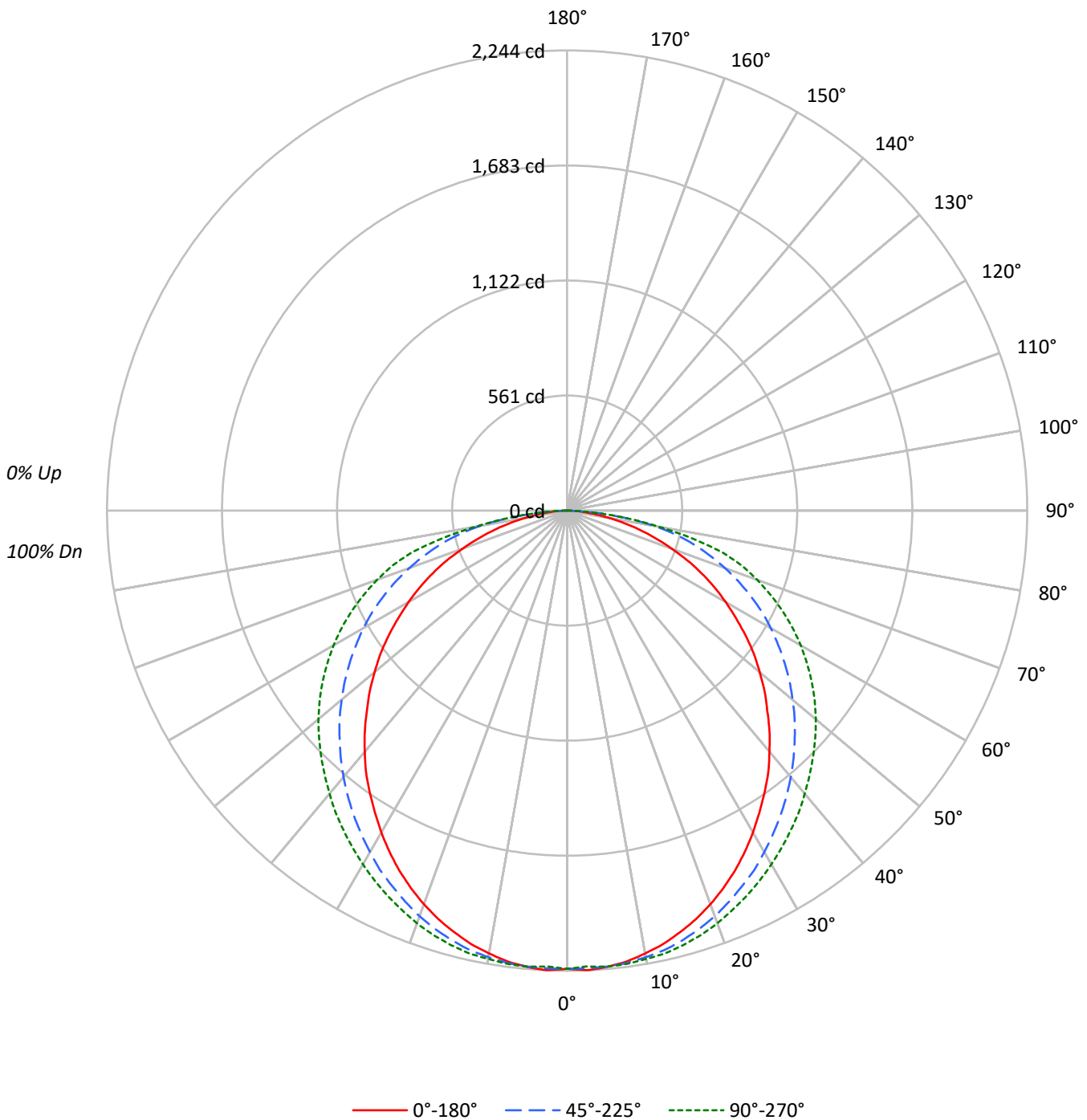
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3006	3006	3006
5°	3018	3015	3015
10°	2996	3021	3034
15°	2964	3022	3054
20°	2925	3014	3067
25°	2875	2998	3077
30°	2815	2987	3095
35°	2756	2980	3124
40°	2696	2980	3166
45°	2626	2987	3228
50°	2565	3005	3314
55°	2491	3038	3417
60°	2404	3087	3541
65°	2300	3145	3689
70°	2134	3223	3877
75°	1932	3336	4056
80°	1627	3344	3488
85°	1247	2530	2530



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.1	3.0
10°-20°	610.2	8.7
20°-30°	926.9	13.3
30°-40°	1127.4	16.1
40°-50°	1200.3	17.2
50°-60°	1143.2	16.4
60°-70°	956.0	13.7
70°-80°	637.4	9.1
80°-90°	176.4	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°	1749.1	25.0
0°-40°	2876.5	41.2
0°-60°	5220.0	74.7
0°-90°	6989.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6989.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2234	2234	2234	2234	2234	
5°	2234	2220	2232	2232	2232	212
15°	2128	2133	2170	2186	2193	600
25°	1937	1962	2020	2054	2073	892
35°	1678	1726	1814	1874	1902	1050
45°	1380	1454	1570	1657	1696	1067
55°	1062	1154	1295	1408	1456	949
65°	722	829	988	1110	1159	714
75°	372	489	642	750	780	394
85°	81	150	164	162	164	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2234.3	2234.3	2234.3	2234.3	2234.3
2.5°	2243.5	2227.4	2234.3	2234.3	2225.1
5°	2234.3	2220.5	2232.0	2232.0	2232.0
7.5°	2218.2	2206.6	2225.1	2229.7	2229.7
10°	2192.8	2188.1	2211.2	2218.2	2220.5
12.5°	2165.1	2162.8	2195.1	2204.3	2211.2
15°	2128.1	2132.8	2169.7	2185.8	2192.8
17.5°	2088.9	2098.1	2139.7	2162.8	2169.7
20°	2042.7	2056.6	2105.1	2128.1	2142.0
22.5°	1992.0	2012.7	2063.5	2091.2	2107.4
25°	1936.6	1961.9	2019.7	2054.3	2072.7
27.5°	1876.5	1908.9	1975.8	2015.0	2033.5
30°	1811.9	1848.8	1922.7	1968.9	1992.0
32.5°	1745.0	1788.8	1869.6	1920.4	1948.1
35°	1678.0	1726.5	1814.2	1874.2	1901.9
37.5°	1611.1	1659.6	1756.5	1821.1	1855.8
40°	1534.9	1592.6	1696.5	1768.1	1802.7
42.5°	1461.1	1523.4	1634.2	1712.7	1749.6
45°	1380.3	1454.1	1569.6	1657.3	1696.5
47.5°	1306.4	1380.3	1504.9	1597.3	1641.1
50°	1225.6	1304.1	1435.7	1537.2	1583.4
52.5°	1147.2	1227.9	1366.4	1474.9	1521.1
55°	1061.8	1154.1	1294.9	1408.0	1456.5
57.5°	976.4	1075.6	1221.0	1338.7	1387.2
60°	893.3	994.8	1147.2	1264.9	1315.7
62.5°	810.2	911.7	1071.0	1191.0	1239.5
65°	722.5	828.6	987.9	1110.2	1158.7
67.5°	634.7	745.5	904.8	1027.1	1073.3
70°	542.4	660.1	819.4	939.4	985.6
72.5°	457.0	574.7	731.7	849.4	893.3
75°	371.6	489.3	641.7	750.2	780.2
77.5°	288.5	406.2	542.4	614.0	620.9
80°	210.0	320.8	431.6	452.4	450.1
82.5°	140.8	240.1	297.8	300.1	307.0
85°	80.8	150.0	163.9	161.6	163.9
87.5°	32.3	53.1	46.2	34.6	34.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)