

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: P389162

Luminaire Tested: **24CZ2-85VHE-SQR-UNV-L930-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: P389162
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-L930-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6814.5 lumens
Efficiency: N/A
Efficacy: 117.7 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

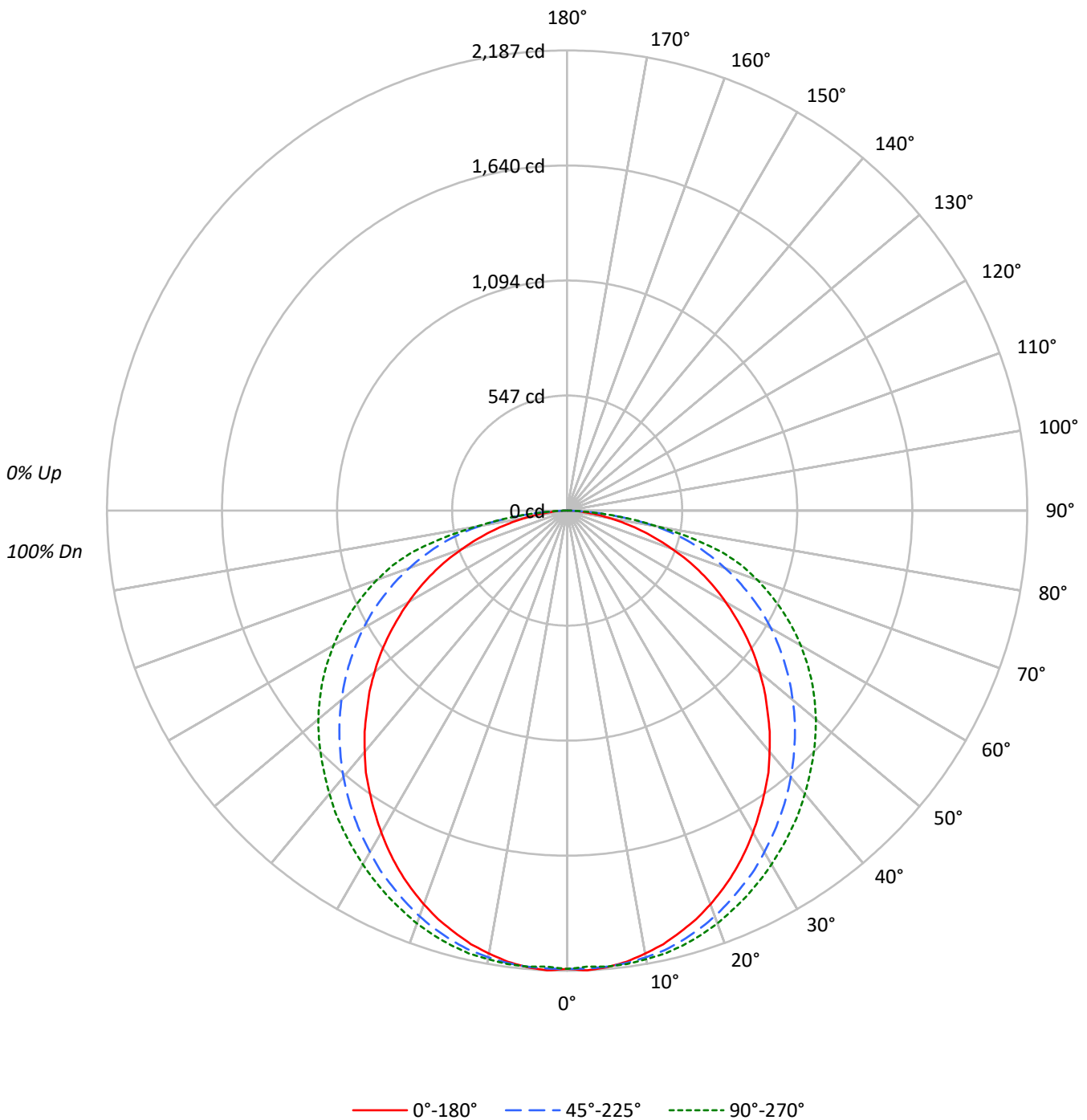
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2931	2931	2931
5°	2942	2939	2939
10°	2921	2945	2958
15°	2890	2946	2978
20°	2852	2938	2990
25°	2803	2923	3000
30°	2744	2912	3017
35°	2687	2905	3046
40°	2628	2905	3087
45°	2561	2912	3147
50°	2501	2930	3231
55°	2428	2961	3331
60°	2343	3010	3451
65°	2242	3066	3596
70°	2080	3142	3780
75°	1883	3252	3954
80°	1587	3261	3400
85°	1216	2467	2467



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.8	3.0
10°-20°	594.9	8.7
20°-30°	903.6	13.3
30°-40°	1099.1	16.1
40°-50°	1170.2	17.2
50°-60°	1114.5	16.4
60°-70°	932.1	13.7
70°-80°	621.4	9.1
80°-90°	172.0	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°	1705.2	25.0
0°-40°	2804.3	41.2
0°-60°	5089.1	74.7
0°-90°	6814.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6814.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2178	2178	2178	2178	2178	
5°	2178	2165	2176	2176	2176	207
15°	2075	2079	2115	2131	2138	585
25°	1888	1913	1969	2003	2021	869
35°	1636	1683	1769	1827	1854	1024
45°	1346	1418	1530	1616	1654	1040
55°	1035	1125	1262	1373	1420	925
65°	704	808	963	1082	1130	696
75°	362	477	626	731	761	384
85°	79	146	160	158	160	95
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2178.2	2178.2	2178.2	2178.2	2178.2
2.5°	2187.2	2171.5	2178.2	2178.2	2169.2
5°	2178.2	2164.7	2176.0	2176.0	2176.0
7.5°	2162.5	2151.2	2169.2	2173.7	2173.7
10°	2137.7	2133.2	2155.7	2162.5	2164.7
12.5°	2110.7	2108.5	2140.0	2149.0	2155.7
15°	2074.7	2079.2	2115.2	2131.0	2137.7
17.5°	2036.5	2045.5	2086.0	2108.5	2115.2
20°	1991.5	2005.0	2052.2	2074.7	2088.2
22.5°	1942.0	1962.2	2011.7	2038.7	2054.5
25°	1888.0	1912.7	1969.0	2002.7	2020.7
27.5°	1829.5	1861.0	1926.2	1964.5	1982.5
30°	1766.4	1802.5	1874.5	1919.5	1942.0
32.5°	1701.2	1743.9	1822.7	1872.2	1899.2
35°	1635.9	1683.2	1768.7	1827.2	1854.2
37.5°	1570.7	1617.9	1712.4	1775.5	1809.2
40°	1496.4	1552.7	1653.9	1723.7	1757.4
42.5°	1424.4	1485.2	1593.2	1669.7	1705.7
45°	1345.7	1417.7	1530.2	1615.7	1653.9
47.5°	1273.6	1345.7	1467.2	1557.2	1599.9
50°	1194.9	1271.4	1399.7	1498.7	1543.7
52.5°	1118.4	1197.1	1332.2	1437.9	1482.9
55°	1035.1	1125.1	1262.4	1372.7	1419.9
57.5°	951.9	1048.6	1190.4	1305.1	1352.4
60°	870.8	969.9	1118.4	1233.1	1282.6
62.5°	789.8	888.9	1044.1	1161.1	1208.4
65°	704.3	807.8	963.1	1082.4	1129.6
67.5°	618.8	726.8	882.1	1001.4	1046.4
70°	528.8	643.6	798.8	915.9	960.9
72.5°	445.6	560.3	713.3	828.1	870.8
75°	362.3	477.1	625.6	731.3	760.6
77.5°	281.3	396.0	528.8	598.6	605.3
80°	204.8	312.8	420.8	441.0	438.8
82.5°	137.3	234.0	290.3	292.5	299.3
85°	78.8	146.3	159.8	157.5	159.8
87.5°	31.5	51.8	45.0	33.8	33.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)