

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: P389187

Luminaire Tested: **24CZ2-90VHE-SQR-UNV-L935-CD1-SDWPD1-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: P389187
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: 24CZ2-90VHE-SQR-UNV-L935-CD1-SDWPD1-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: 7172.1 lumens
Efficiency: N/A
Efficacy: 116.1 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

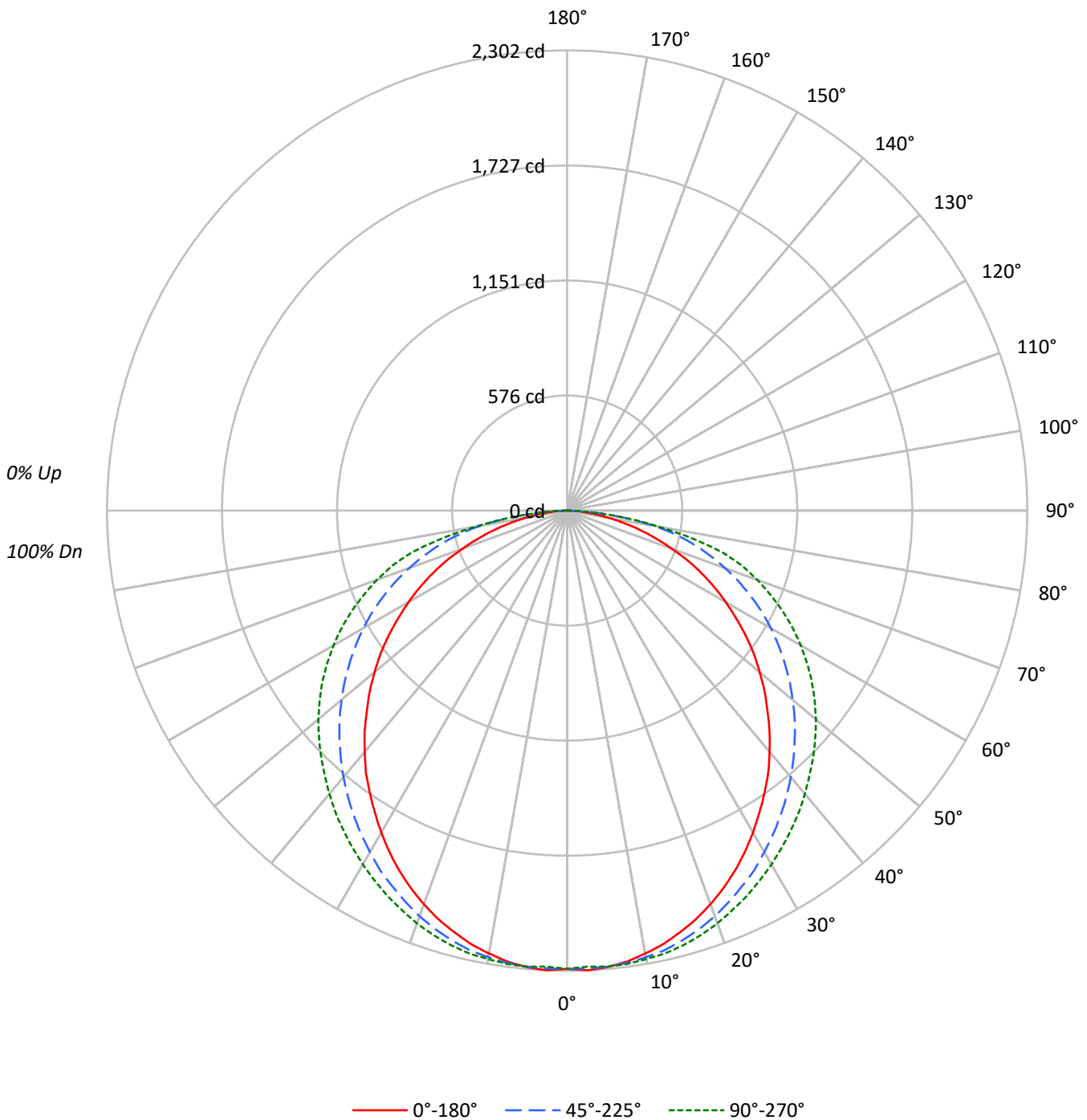
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3085	3085	3085
5°	3096	3093	3093
10°	3074	3100	3113
15°	3042	3101	3134
20°	3001	3093	3147
25°	2950	3077	3157
30°	2888	3065	3175
35°	2828	3058	3205
40°	2766	3057	3249
45°	2695	3064	3312
50°	2632	3084	3401
55°	2556	3117	3506
60°	2466	3168	3633
65°	2360	3227	3785
70°	2190	3308	3978
75°	1982	3423	4161
80°	1670	3432	3578
85°	1280	2597	2597



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	217.6	3.0
10°-20°	626.1	8.7
20°-30°	951.0	13.3
30°-40°	1156.8	16.1
40°-50°	1231.6	17.2
50°-60°	1173.0	16.4
60°-70°	981.0	13.7
70°-80°	654.0	9.1
80°-90°	181.0	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°	1794.7	25.0
0°-40°	2951.5	41.2
0°-60°	5356.1	74.7
0°-90°	7172.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7172.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2293	2293	2293	2293	2293	
5°	2293	2278	2290	2290	2290	217
15°	2184	2188	2226	2243	2250	616
25°	1987	2013	2072	2108	2127	915
35°	1722	1772	1862	1923	1952	1077
45°	1416	1492	1610	1700	1741	1095
55°	1089	1184	1329	1445	1494	974
65°	741	850	1014	1139	1189	732
75°	381	502	658	770	800	404
85°	83	154	168	166	168	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2292.6	2292.6	2292.6	2292.6	2292.6
2.5°	2302.0	2285.4	2292.6	2292.6	2283.1
5°	2292.6	2278.3	2290.2	2290.2	2290.2
7.5°	2276.0	2264.1	2283.1	2287.8	2287.8
10°	2249.9	2245.2	2268.9	2276.0	2278.3
12.5°	2221.5	2219.1	2252.3	2261.8	2268.9
15°	2183.6	2188.3	2226.2	2242.8	2249.9
17.5°	2143.3	2152.8	2195.5	2219.1	2226.2
20°	2096.0	2110.2	2159.9	2183.6	2197.8
22.5°	2043.9	2065.2	2117.3	2145.7	2162.3
25°	1987.0	2013.1	2072.3	2107.8	2126.8
27.5°	1925.5	1958.6	2027.3	2067.6	2086.5
30°	1859.1	1897.0	1972.8	2020.2	2043.9
32.5°	1790.5	1835.5	1918.4	1970.5	1998.9
35°	1721.8	1771.5	1861.5	1923.1	1951.5
37.5°	1653.1	1702.8	1802.3	1868.6	1904.1
40°	1574.9	1634.2	1740.7	1814.1	1849.7
42.5°	1499.2	1563.1	1676.8	1757.3	1795.2
45°	1416.3	1492.1	1610.5	1700.5	1740.7
47.5°	1340.5	1416.3	1544.2	1638.9	1683.9
50°	1257.6	1338.1	1473.1	1577.3	1624.7
52.5°	1177.1	1260.0	1402.1	1513.4	1560.7
55°	1089.4	1184.2	1328.6	1444.7	1494.4
57.5°	1001.8	1103.6	1252.9	1373.6	1423.4
60°	916.5	1020.8	1177.1	1297.8	1350.0
62.5°	831.3	935.5	1098.9	1222.1	1271.8
65°	741.3	850.2	1013.6	1139.2	1188.9
67.5°	651.3	765.0	928.4	1053.9	1101.3
70°	556.6	677.3	840.8	963.9	1011.3
72.5°	468.9	589.7	750.8	871.5	916.5
75°	381.3	502.1	658.4	769.7	800.5
77.5°	296.0	416.8	556.6	630.0	637.1
80°	215.5	329.2	442.9	464.2	461.8
82.5°	144.5	246.3	305.5	307.9	315.0
85°	82.9	153.9	168.2	165.8	168.2
87.5°	33.2	54.5	47.4	35.5	35.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)