

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: P389188

Luminaire Tested: **24CZ2-90VHE-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: P389188
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-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: 7259.7 lumens
Efficiency: N/A
Efficacy: 117.5 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

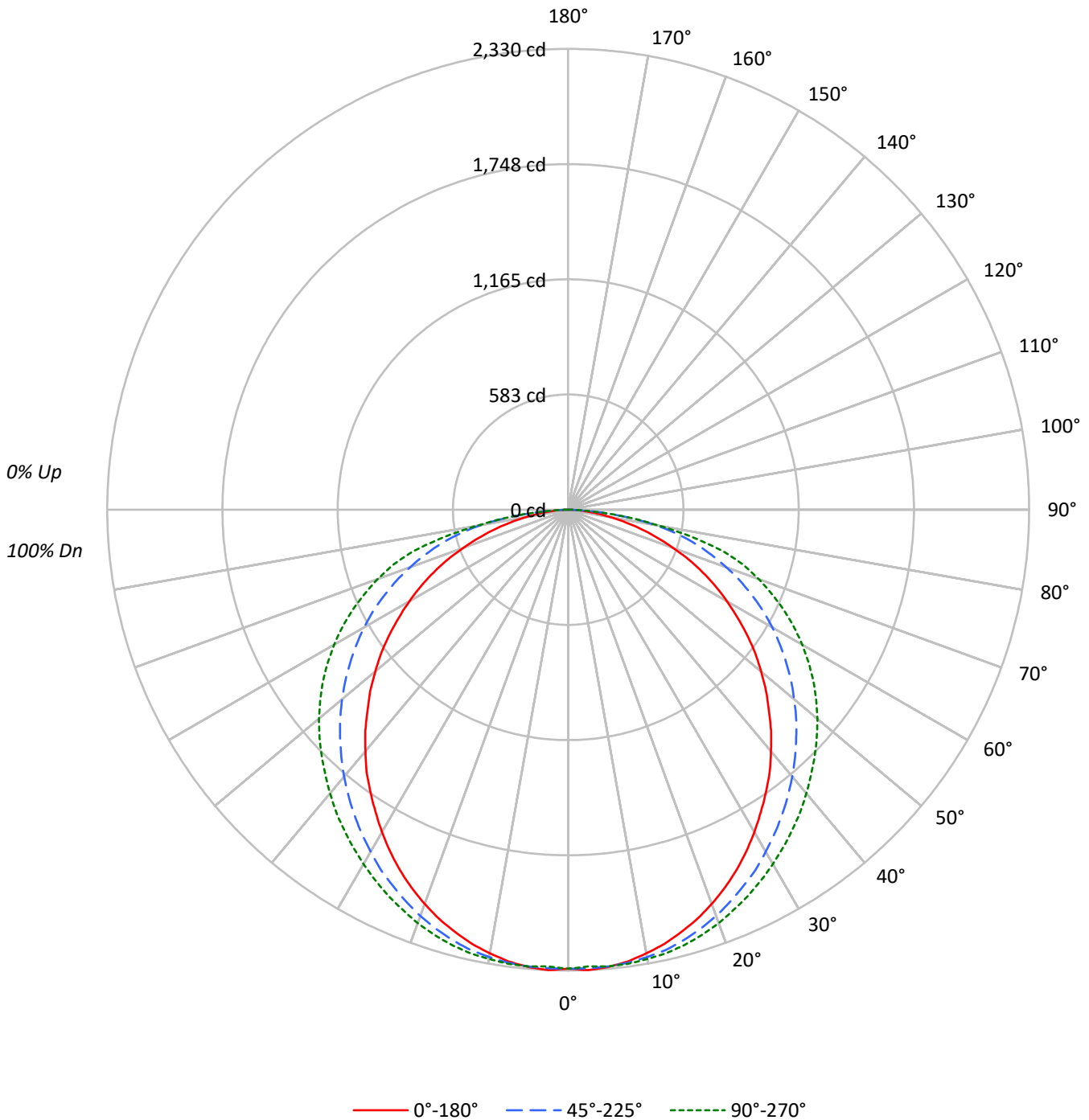
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3122	3122	3122
5°	3134	3131	3131
10°	3111	3138	3151
15°	3079	3139	3172
20°	3038	3130	3185
25°	2986	3114	3196
30°	2924	3102	3214
35°	2863	3095	3245
40°	2800	3095	3289
45°	2728	3102	3353
50°	2664	3121	3442
55°	2587	3155	3548
60°	2496	3206	3677
65°	2389	3266	3831
70°	2216	3348	4027
75°	2007	3464	4212
80°	1691	3474	3622
85°	1295	2628	2628



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	220.3	3.0
10°-20°	633.8	8.7
20°-30°	962.6	13.3
30°-40°	1170.9	16.1
40°-50°	1246.6	17.2
50°-60°	1187.4	16.4
60°-70°	992.9	13.7
70°-80°	662.0	9.1
80°-90°	183.2	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°	1816.7	25.0
0°-40°	2987.6	41.2
0°-60°	5421.5	74.7
0°-90°	7259.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7259.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2321	2321	2321	2321	2321	
5°	2321	2306	2318	2318	2318	220
15°	2210	2215	2253	2270	2277	623
25°	2011	2038	2098	2134	2153	926
35°	1743	1793	1884	1947	1975	1091
45°	1434	1510	1630	1721	1762	1108
55°	1103	1199	1345	1462	1513	986
65°	750	861	1026	1153	1203	741
75°	386	508	666	779	810	409
85°	84	156	170	168	170	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2320.6	2320.6	2320.6	2320.6	2320.6
2.5°	2330.1	2313.4	2320.6	2320.6	2311.0
5°	2320.6	2306.2	2318.2	2318.2	2318.2
7.5°	2303.8	2291.8	2311.0	2315.8	2315.8
10°	2277.4	2272.6	2296.6	2303.8	2306.2
12.5°	2248.6	2246.2	2279.8	2289.4	2296.6
15°	2210.3	2215.1	2253.4	2270.2	2277.4
17.5°	2169.5	2179.1	2222.3	2246.2	2253.4
20°	2121.6	2136.0	2186.3	2210.3	2224.7
22.5°	2068.8	2090.4	2143.2	2171.9	2188.7
25°	2011.3	2037.7	2097.6	2133.6	2152.7
27.5°	1949.0	1982.5	2052.1	2092.8	2112.0
30°	1881.9	1920.2	1996.9	2044.9	2068.8
32.5°	1812.3	1857.9	1941.8	1994.5	2023.3
35°	1742.8	1793.2	1884.3	1946.6	1975.3
37.5°	1673.3	1723.6	1824.3	1891.4	1927.4
40°	1594.2	1654.1	1762.0	1836.3	1872.3
42.5°	1517.5	1582.2	1697.3	1778.8	1817.1
45°	1433.6	1510.3	1630.1	1721.2	1762.0
47.5°	1356.9	1433.6	1563.0	1658.9	1704.5
50°	1272.9	1354.5	1491.1	1596.6	1644.5
52.5°	1191.4	1275.3	1419.2	1531.9	1579.8
55°	1102.7	1198.6	1344.9	1462.3	1512.7
57.5°	1014.0	1117.1	1268.2	1390.4	1440.8
60°	927.7	1033.2	1191.4	1313.7	1366.4
62.5°	841.4	946.9	1112.3	1237.0	1287.3
65°	750.3	860.6	1026.0	1153.1	1203.4
67.5°	659.2	774.3	939.7	1066.8	1114.7
70°	563.4	685.6	851.0	975.7	1023.6
72.5°	474.7	596.9	759.9	882.2	927.7
75°	386.0	508.2	666.4	779.1	810.3
77.5°	299.7	421.9	563.4	637.7	644.9
80°	218.2	333.2	448.3	469.9	467.5
82.5°	146.2	249.3	309.2	311.6	318.8
85°	83.9	155.8	170.2	167.8	170.2
87.5°	33.6	55.1	47.9	36.0	36.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)