

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: P388999

Luminaire Tested: **24CZ2-80VHE-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: P388999
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-80VHE-UNV-L950-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7278.3 lumens
Efficiency: N/A
Efficacy: 135.3 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

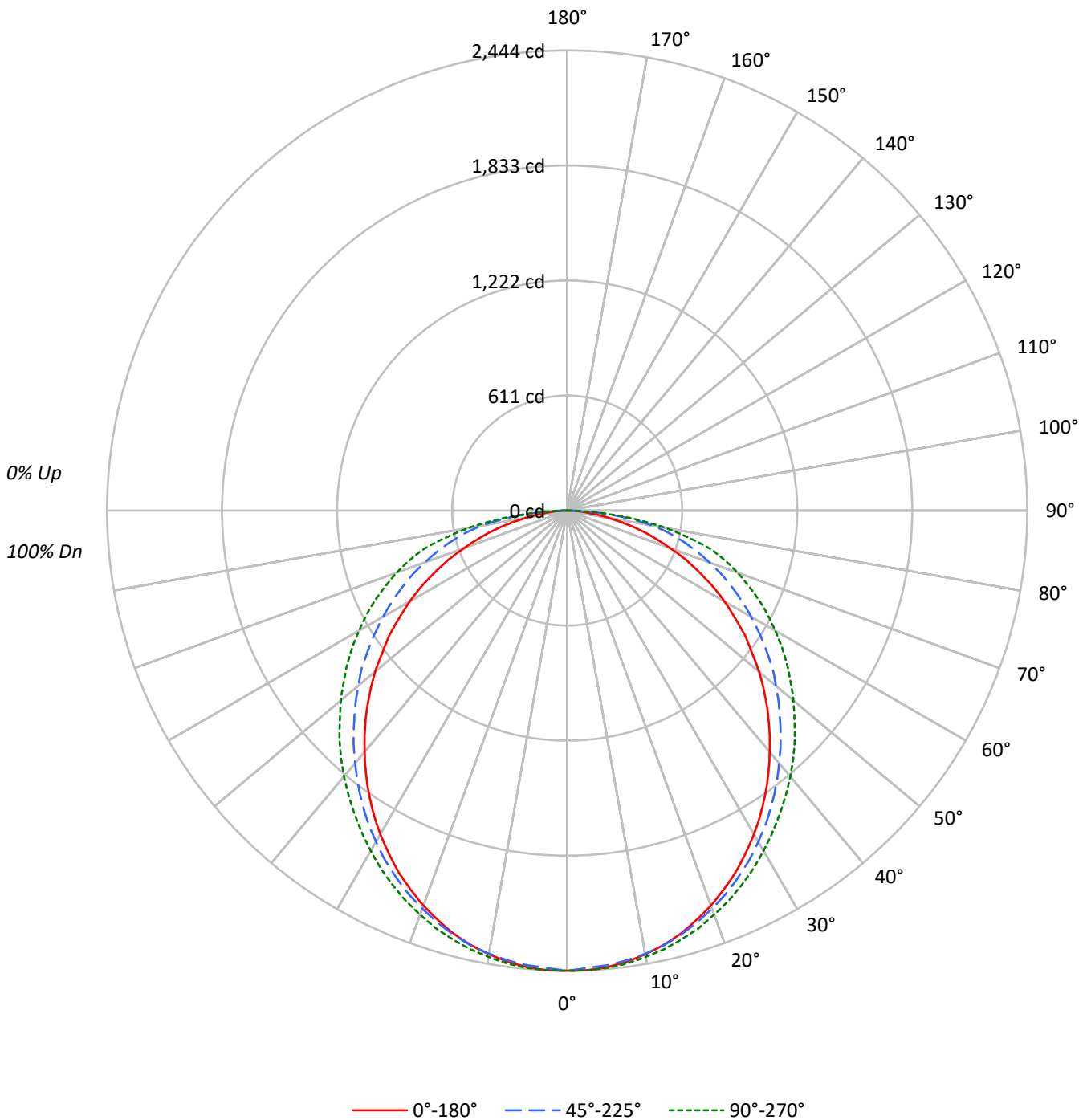
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3288	3288	3288
5°	3287	3274	3294
10°	3269	3266	3289
15°	3242	3248	3282
20°	3196	3221	3269
25°	3145	3191	3256
30°	3083	3155	3242
35°	3016	3116	3232
40°	2940	3076	3238
45°	2866	3046	3254
50°	2786	3030	3285
55°	2701	3026	3345
60°	2595	3039	3432
65°	2459	3086	3581
70°	2284	3163	3784
75°	2084	3321	4104
80°	1712	3576	4103
85°	1312	3301	3524



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.1	3.2
10°-20°	659.8	9.1
20°-30°	992.9	13.6
30°-40°	1189.9	16.3
40°-50°	1240.0	17.0
50°-60°	1153.7	15.9
60°-70°	950.2	13.1
70°-80°	647.1	8.9
80°-90°	213.6	2.9
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°	1883.8	25.9
0°-40°	3073.7	42.2
0°-60°	5467.4	75.1
0°-90°	7278.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7278.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2444	2444	2444	2444	2444	
5°	2434	2434	2424	2436	2439	231
15°	2327	2330	2332	2354	2356	656
25°	2118	2128	2150	2186	2194	975
35°	1836	1858	1897	1948	1968	1148
45°	1506	1538	1601	1681	1710	1162
55°	1151	1190	1290	1392	1426	1026
65°	772	838	969	1083	1125	767
75°	401	491	639	753	790	423
85°	85	165	214	228	228	105
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2443.7	2443.7	2443.7	2443.7	2443.7
2.5°	2443.7	2443.7	2431.5	2443.7	2443.7
5°	2433.9	2433.9	2424.2	2436.4	2438.8
7.5°	2416.9	2419.4	2409.7	2424.2	2426.7
10°	2392.7	2395.1	2390.2	2404.8	2407.2
12.5°	2363.5	2365.9	2365.9	2382.9	2385.4
15°	2327.1	2329.5	2331.9	2353.8	2356.2
17.5°	2280.9	2288.2	2293.1	2319.8	2324.6
20°	2232.3	2239.6	2249.3	2278.5	2283.3
22.5°	2176.5	2186.2	2203.2	2234.8	2242.0
25°	2118.2	2127.9	2149.7	2186.2	2193.5
27.5°	2052.6	2067.2	2093.9	2132.7	2142.5
30°	1984.6	1999.1	2030.7	2072.0	2086.6
32.5°	1911.7	1931.1	1967.6	2013.7	2028.3
35°	1836.4	1858.3	1897.1	1948.1	1967.6
37.5°	1756.2	1780.5	1826.7	1882.5	1906.8
40°	1673.6	1702.8	1751.4	1817.0	1843.7
42.5°	1591.1	1617.8	1678.5	1748.9	1778.1
45°	1506.0	1537.6	1600.8	1680.9	1710.1
47.5°	1418.6	1450.2	1525.5	1610.5	1637.2
50°	1331.1	1362.7	1447.7	1537.6	1569.2
52.5°	1236.4	1277.7	1374.9	1464.7	1496.3
55°	1151.4	1190.3	1289.8	1391.9	1425.9
57.5°	1054.2	1100.4	1209.7	1316.6	1353.0
60°	964.3	1012.9	1129.5	1238.8	1275.3
62.5°	872.0	925.5	1049.4	1161.1	1202.4
65°	772.5	838.0	969.2	1083.4	1124.7
67.5°	682.6	750.6	889.0	1005.6	1042.1
70°	580.6	663.1	804.0	920.6	961.9
72.5°	493.1	575.7	723.9	838.0	879.3
75°	400.8	490.7	638.9	753.0	789.5
77.5°	308.5	408.1	556.3	643.7	655.9
80°	221.0	325.5	461.5	512.5	529.5
82.5°	155.5	250.2	340.1	374.1	383.8
85°	85.0	165.2	213.8	228.3	228.3
87.5°	36.4	70.4	85.0	87.4	89.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)