

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: P388993

Luminaire Tested: **24CZ2-80VHE-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: P388993
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-L935-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6786.8 lumens
Efficiency: N/A
Efficacy: 126.1 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

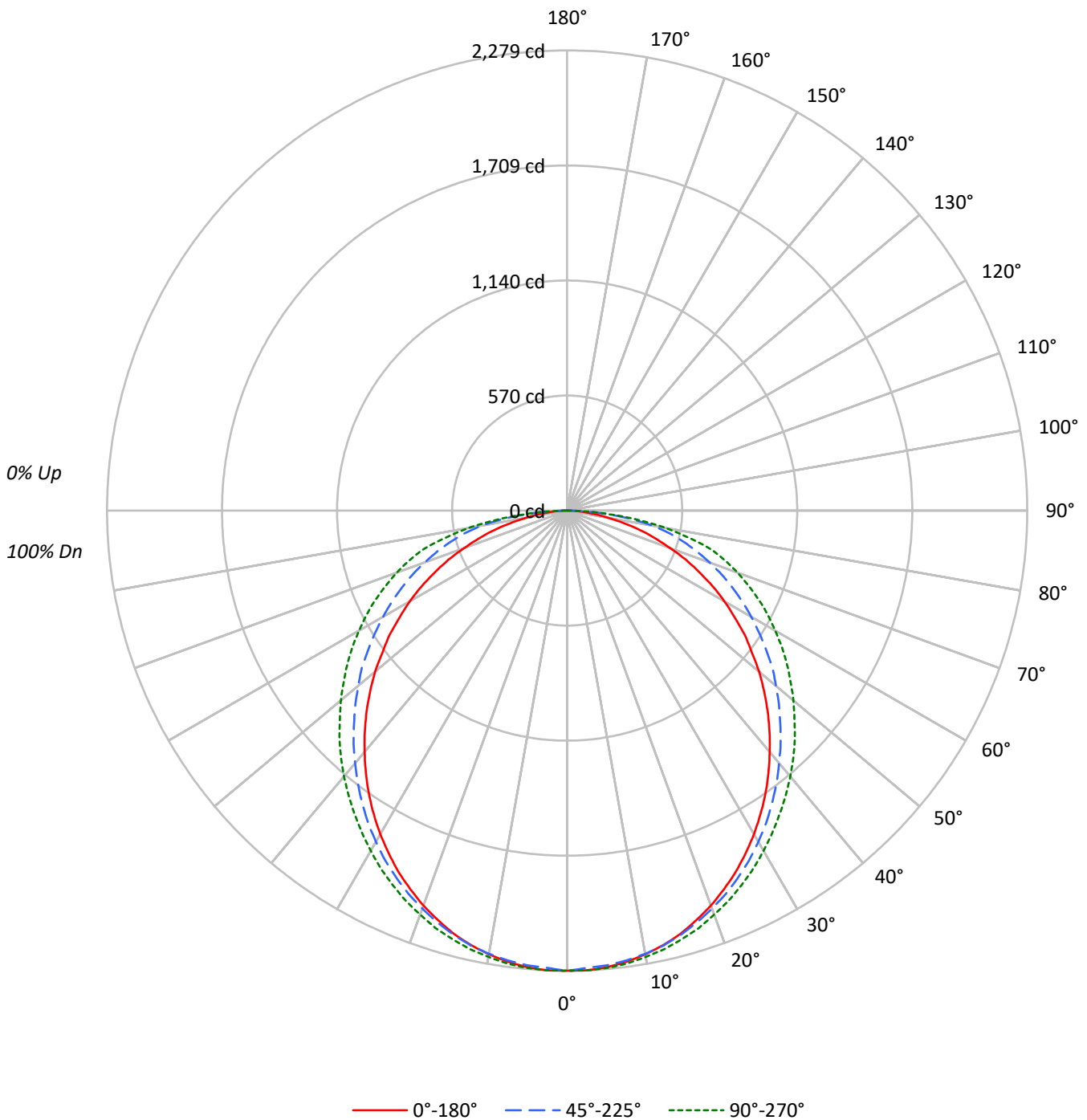
Input Watts (W): 53.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3066	3066	3066
5°	3065	3053	3071
10°	3048	3045	3067
15°	3023	3029	3060
20°	2981	3003	3049
25°	2932	2976	3036
30°	2875	2942	3023
35°	2813	2906	3014
40°	2741	2868	3020
45°	2672	2840	3034
50°	2598	2826	3063
55°	2518	2821	3119
60°	2420	2834	3200
65°	2293	2877	3339
70°	2129	2949	3529
75°	1943	3097	3827
80°	1597	3335	3826
85°	1224	3077	3287



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.5	3.2
10°-20°	615.3	9.1
20°-30°	925.8	13.6
30°-40°	1109.5	16.3
40°-50°	1156.2	17.0
50°-60°	1075.8	15.9
60°-70°	886.0	13.1
70°-80°	603.4	8.9
80°-90°	199.2	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°	1756.6	25.9
0°-40°	2866.1	42.2
0°-60°	5098.1	75.1
0°-90°	6786.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6786.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2279	2279	2279	2279	2279	
5°	2270	2270	2260	2272	2274	215
15°	2170	2172	2174	2195	2197	611
25°	1975	1984	2005	2038	2045	909
35°	1712	1733	1769	1817	1835	1070
45°	1404	1434	1493	1567	1595	1083
55°	1074	1110	1203	1298	1330	957
65°	720	781	904	1010	1049	715
75°	374	458	596	702	736	394
85°	79	154	199	213	213	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2278.6	2278.6	2278.6	2278.6	2278.6
2.5°	2278.6	2278.6	2267.3	2278.6	2278.6
5°	2269.6	2269.6	2260.5	2271.8	2274.1
7.5°	2253.7	2256.0	2246.9	2260.5	2262.8
10°	2231.1	2233.3	2228.8	2242.4	2244.7
12.5°	2203.9	2206.2	2206.2	2222.0	2224.3
15°	2169.9	2172.2	2174.5	2194.8	2197.1
17.5°	2126.9	2133.7	2138.2	2163.1	2167.7
20°	2081.6	2088.4	2097.4	2124.6	2129.2
22.5°	2029.5	2038.5	2054.4	2083.8	2090.6
25°	1975.1	1984.2	2004.6	2038.5	2045.3
27.5°	1914.0	1927.6	1952.5	1988.7	1997.8
30°	1850.5	1864.1	1893.6	1932.1	1945.7
32.5°	1782.6	1800.7	1834.7	1877.7	1891.3
35°	1712.4	1732.8	1769.0	1816.6	1834.7
37.5°	1637.6	1660.3	1703.3	1755.4	1778.1
40°	1560.6	1587.8	1633.1	1694.3	1719.2
42.5°	1483.6	1508.5	1565.2	1630.8	1658.0
45°	1404.3	1433.8	1492.7	1567.4	1594.6
47.5°	1322.8	1352.2	1422.5	1501.7	1526.6
50°	1241.2	1270.7	1350.0	1433.8	1463.2
52.5°	1152.9	1191.4	1282.0	1365.8	1395.3
55°	1073.6	1109.9	1202.7	1297.9	1329.6
57.5°	983.0	1026.1	1128.0	1227.7	1261.6
60°	899.2	944.5	1053.3	1155.2	1189.2
62.5°	813.2	863.0	978.5	1082.7	1121.2
65°	720.3	781.4	903.8	1010.2	1048.7
67.5°	636.5	699.9	829.0	937.7	971.7
70°	541.3	618.4	749.7	858.5	897.0
72.5°	459.8	536.8	675.0	781.4	819.9
75°	373.7	457.5	595.7	702.2	736.1
77.5°	287.7	380.5	518.7	600.2	611.6
80°	206.1	303.5	430.4	477.9	493.8
82.5°	145.0	233.3	317.1	348.8	357.9
85°	79.3	154.0	199.3	212.9	212.9
87.5°	34.0	65.7	79.3	81.5	83.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)