

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: P388344

Luminaire Tested: **24CZ2-120VHE-SQR-UNV-L930-CD2-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: P388344
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: 24CZ2-120VHE-SQR-UNV-L930-CD2-SDWPD1-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: 9440.5 lumens
Efficiency: N/A
Efficacy: 112.9 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

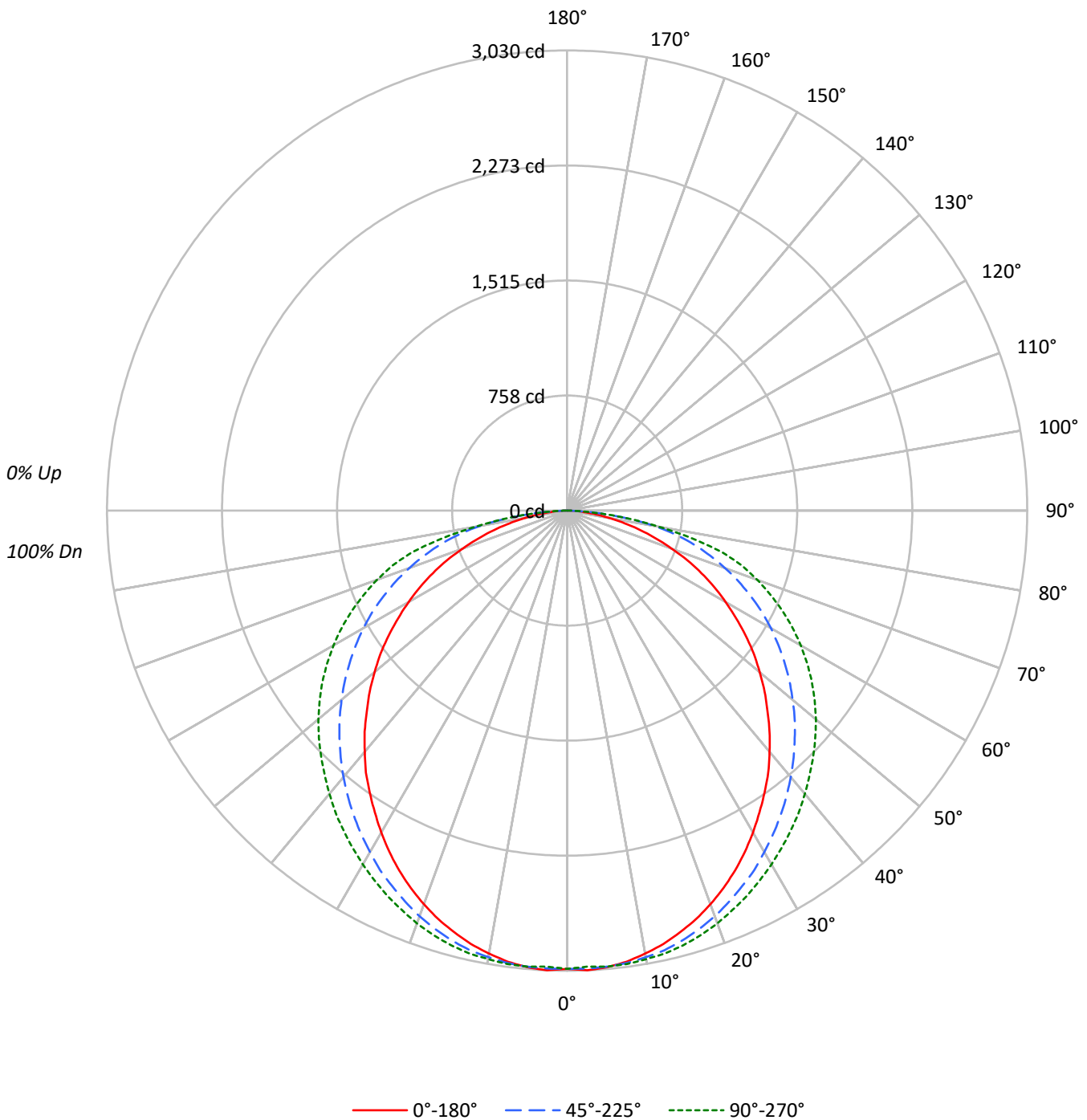
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4060	4060	4060
5°	4076	4071	4071
10°	4046	4080	4097
15°	4004	4082	4125
20°	3950	4071	4142
25°	3883	4049	4156
30°	3802	4034	4180
35°	3722	4025	4219
40°	3641	4024	4276
45°	3547	4034	4360
50°	3465	4059	4476
55°	3364	4103	4614
60°	3246	4169	4782
65°	3106	4248	4982
70°	2882	4354	5236
75°	2609	4505	5478
80°	2198	4517	4710
85°	1684	3416	3416



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	286.4	3.0
10°-20°	824.1	8.7
20°-30°	1251.8	13.3
30°-40°	1522.6	16.1
40°-50°	1621.1	17.2
50°-60°	1544.0	16.4
60°-70°	1291.2	13.7
70°-80°	860.9	9.1
80°-90°	238.2	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°	2362.4	25.0
0°-40°	3885.0	41.2
0°-60°	7050.1	74.7
0°-90°	9440.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9440.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3018	3018	3018	3018	3018	
5°	3018	2999	3014	3014	3014	286
15°	2874	2880	2930	2952	2962	811
25°	2616	2650	2728	2774	2799	1204
35°	2266	2332	2450	2531	2569	1418
45°	1864	1964	2120	2238	2291	1441
55°	1434	1559	1749	1902	1967	1282
65°	976	1119	1334	1500	1565	964
75°	502	661	867	1013	1054	532
85°	109	203	221	218	221	132
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3017.6	3017.6	3017.6	3017.6	3017.6
2.5°	3030.1	3008.3	3017.6	3017.6	3005.2
5°	3017.6	2998.9	3014.5	3014.5	3014.5
7.5°	2995.8	2980.2	3005.2	3011.4	3011.4
10°	2961.5	2955.3	2986.5	2995.8	2998.9
12.5°	2924.1	2921.0	2964.6	2977.1	2986.5
15°	2874.2	2880.5	2930.4	2952.2	2961.5
17.5°	2821.2	2833.7	2889.8	2921.0	2930.4
20°	2758.9	2777.6	2843.1	2874.2	2892.9
22.5°	2690.3	2718.4	2787.0	2824.4	2846.2
25°	2615.5	2649.8	2727.7	2774.5	2799.4
27.5°	2534.4	2578.1	2668.5	2721.5	2746.4
30°	2447.2	2497.0	2596.8	2659.1	2690.3
32.5°	2356.8	2416.0	2525.1	2593.7	2631.1
35°	2266.3	2331.8	2450.3	2531.3	2568.7
37.5°	2175.9	2241.4	2372.3	2459.6	2506.4
40°	2073.1	2151.0	2291.3	2387.9	2434.7
42.5°	1973.3	2057.5	2207.1	2313.1	2363.0
45°	1864.2	1964.0	2119.8	2238.3	2291.3
47.5°	1764.4	1864.2	2032.5	2157.2	2216.5
50°	1655.3	1761.3	1939.0	2076.2	2138.5
52.5°	1549.3	1658.5	1845.5	1992.0	2054.4
55°	1434.0	1558.7	1748.9	1901.6	1967.1
57.5°	1318.7	1452.7	1649.1	1808.1	1873.6
60°	1206.4	1343.6	1549.3	1708.3	1776.9
62.5°	1094.2	1231.4	1446.5	1608.6	1674.0
65°	975.7	1119.1	1334.2	1499.5	1564.9
67.5°	857.3	1006.9	1222.0	1387.2	1449.6
70°	732.6	891.6	1106.7	1268.8	1331.1
72.5°	617.2	776.2	988.2	1147.2	1206.4
75°	501.9	660.9	866.6	1013.2	1053.7
77.5°	389.7	548.7	732.6	829.2	838.6
80°	283.7	433.3	583.0	611.0	607.9
82.5°	190.2	324.2	402.1	405.3	414.6
85°	109.1	202.6	221.3	218.2	221.3
87.5°	43.6	71.7	62.3	46.8	46.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)