

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: P388349

Luminaire Tested: **24CZ2-120VHE-SQR-UNV-L935-CD2-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: P388349
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-L935-CD2-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: 9915.1 lumens
Efficiency: N/A
Efficacy: 118.6 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

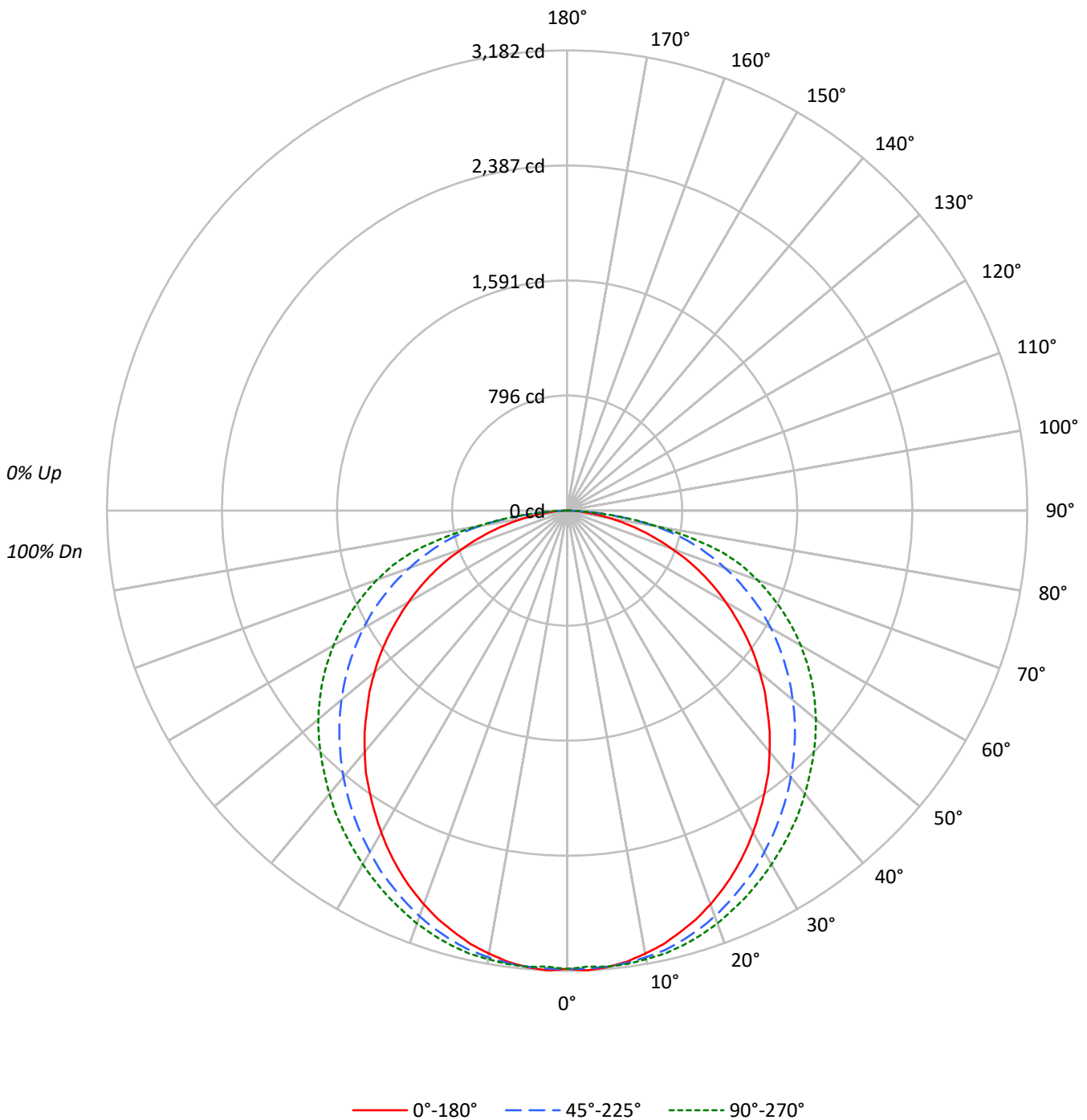
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4264	4264	4264
5°	4281	4276	4276
10°	4250	4285	4303
15°	4205	4287	4333
20°	4149	4275	4351
25°	4078	4253	4365
30°	3993	4237	4390
35°	3910	4227	4431
40°	3824	4227	4491
45°	3726	4236	4579
50°	3639	4263	4701
55°	3533	4309	4846
60°	3410	4379	5022
65°	3263	4461	5233
70°	3027	4572	5500
75°	2740	4732	5753
80°	2308	4744	4947
85°	1769	3589	3589



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	300.8	3.0
10°-20°	865.6	8.7
20°-30°	1314.7	13.3
30°-40°	1599.2	16.1
40°-50°	1702.6	17.2
50°-60°	1621.7	16.4
60°-70°	1356.2	13.7
70°-80°	904.2	9.1
80°-90°	250.2	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°	2481.1	25.0
0°-40°	4080.3	41.2
0°-60°	7404.6	74.7
0°-90°	9915.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9915.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3169	3169	3169	3169	3169	
5°	3169	3150	3166	3166	3166	301
15°	3019	3025	3078	3101	3110	851
25°	2747	2783	2865	2914	2940	1265
35°	2380	2449	2574	2659	2698	1490
45°	1958	2063	2226	2351	2406	1514
55°	1506	1637	1837	1997	2066	1346
65°	1025	1175	1401	1575	1644	1012
75°	527	694	910	1064	1107	558
85°	115	213	232	229	232	138
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3169.3	3169.3	3169.3	3169.3	3169.3
2.5°	3182.4	3159.5	3169.3	3169.3	3156.3
5°	3169.3	3149.7	3166.1	3166.1	3166.1
7.5°	3146.4	3130.1	3156.3	3162.8	3162.8
10°	3110.4	3103.9	3136.6	3146.4	3149.7
12.5°	3071.1	3067.9	3113.7	3126.8	3136.6
15°	3018.7	3025.3	3077.7	3100.6	3110.4
17.5°	2963.1	2976.2	3035.1	3067.9	3077.7
20°	2897.6	2917.2	2986.0	3018.7	3038.4
22.5°	2825.6	2855.0	2927.1	2966.4	2989.3
25°	2747.0	2783.0	2864.9	2914.0	2940.2
27.5°	2661.9	2707.7	2802.6	2858.3	2884.5
30°	2570.2	2622.6	2727.3	2792.8	2825.6
32.5°	2475.2	2537.4	2652.0	2724.1	2763.4
35°	2380.3	2449.0	2573.5	2658.6	2697.9
37.5°	2285.3	2354.1	2491.6	2583.3	2632.4
40°	2177.3	2259.1	2406.5	2508.0	2557.1
42.5°	2072.5	2160.9	2318.1	2429.4	2481.8
45°	1957.9	2062.7	2226.4	2350.8	2406.5
47.5°	1853.2	1957.9	2134.7	2265.7	2327.9
50°	1738.6	1849.9	2036.5	2180.6	2246.0
52.5°	1627.2	1741.8	1938.3	2092.2	2157.6
55°	1506.1	1637.1	1836.8	1997.2	2066.0
57.5°	1385.0	1525.7	1732.0	1899.0	1967.7
60°	1267.1	1411.1	1627.2	1794.2	1866.2
62.5°	1149.2	1293.3	1519.2	1689.4	1758.2
65°	1024.8	1175.4	1401.3	1574.9	1643.6
67.5°	900.4	1057.5	1283.5	1457.0	1522.5
70°	769.4	936.4	1162.3	1332.6	1398.0
72.5°	648.3	815.3	1037.9	1204.9	1267.1
75°	527.1	694.1	910.2	1064.1	1106.7
77.5°	409.3	576.2	769.4	870.9	880.7
80°	297.9	455.1	612.3	641.7	638.5
82.5°	199.7	340.5	422.4	425.6	435.5
85°	114.6	212.8	232.5	229.2	232.5
87.5°	45.8	75.3	65.5	49.1	49.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)