

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: P388355

Luminaire Tested: **24CZ2-120VHE-SQR-UNV-L950-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: P388355
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-L950-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10633.1 lumens
Efficiency: N/A
Efficacy: 127.2 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

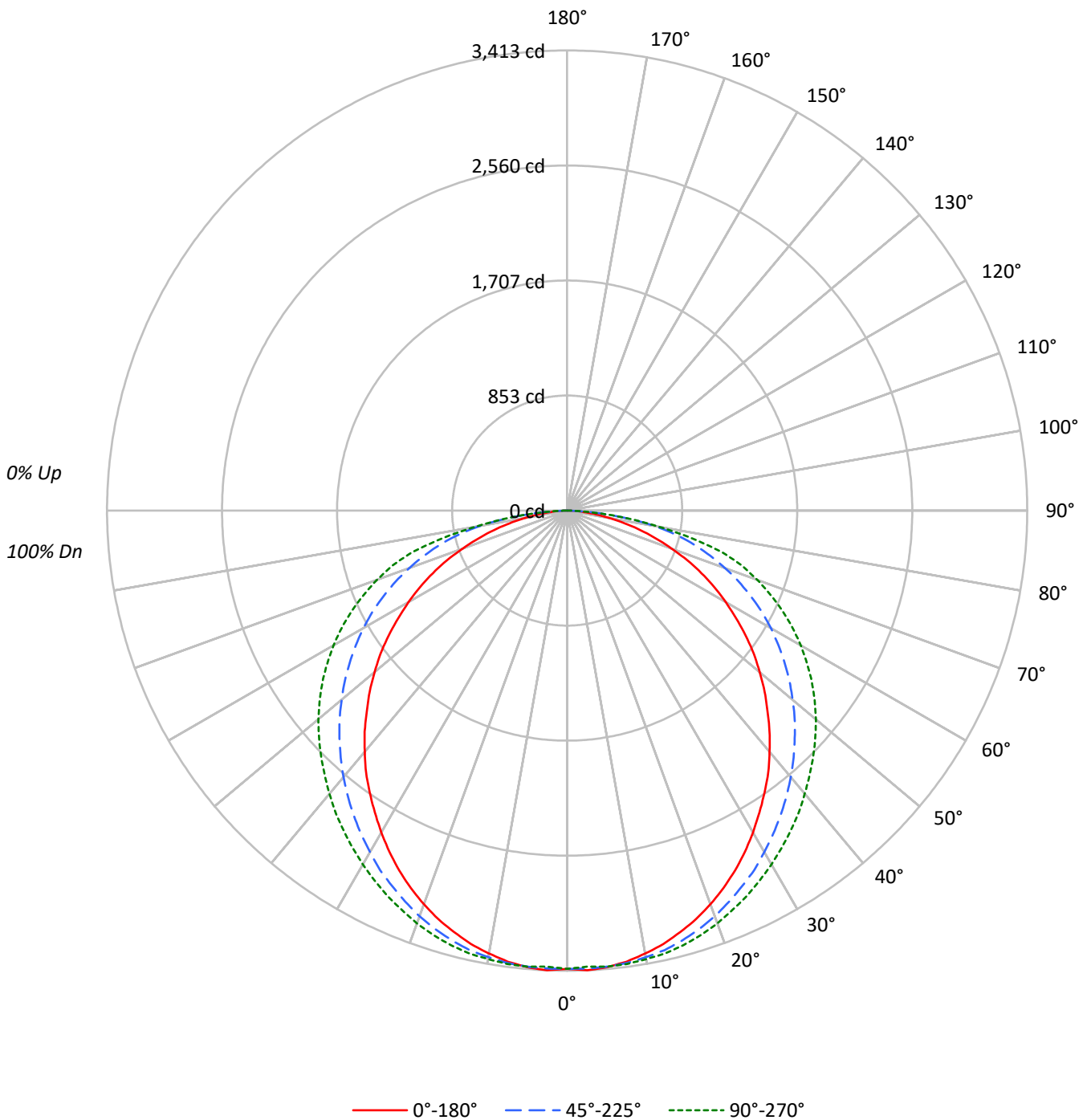
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4573	4573	4573
5°	4591	4586	4586
10°	4557	4596	4615
15°	4509	4597	4646
20°	4449	4585	4666
25°	4373	4561	4681
30°	4282	4544	4708
35°	4193	4533	4752
40°	4101	4533	4817
45°	3995	4543	4911
50°	3903	4572	5042
55°	3789	4621	5197
60°	3657	4696	5386
65°	3499	4784	5612
70°	3246	4904	5898
75°	2939	5074	6170
80°	2476	5088	5305
85°	1897	3849	3849



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	322.6	3.0
10°-20°	928.2	8.7
20°-30°	1409.9	13.3
30°-40°	1715.0	16.1
40°-50°	1825.9	17.2
50°-60°	1739.1	16.4
60°-70°	1454.4	13.7
70°-80°	969.7	9.1
80°-90°	268.3	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°	2660.8	25.0
0°-40°	4375.8	41.2
0°-60°	7940.8	74.7
0°-90°	10633.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10633.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3399	3399	3399	3399	3399	
5°	3399	3378	3395	3395	3395	322
15°	3237	3244	3300	3325	3336	913
25°	2946	2984	3072	3125	3153	1356
35°	2553	2626	2760	2851	2893	1597
45°	2100	2212	2388	2521	2581	1623
55°	1615	1756	1970	2142	2216	1444
65°	1099	1260	1503	1689	1763	1086
75°	565	744	976	1141	1187	599
85°	123	228	249	246	249	149
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3398.9	3398.9	3398.9	3398.9	3398.9
2.5°	3412.9	3388.3	3398.9	3398.9	3384.8
5°	3398.9	3377.8	3395.3	3395.3	3395.3
7.5°	3374.3	3356.7	3384.8	3391.8	3391.8
10°	3335.7	3328.6	3363.7	3374.3	3377.8
12.5°	3293.5	3290.0	3339.2	3353.2	3363.7
15°	3237.3	3244.4	3300.5	3325.1	3335.7
17.5°	3177.6	3191.7	3254.9	3290.0	3300.5
20°	3107.4	3128.5	3202.2	3237.3	3258.4
22.5°	3030.2	3061.8	3139.0	3181.2	3205.7
25°	2945.9	2984.5	3072.3	3125.0	3153.1
27.5°	2854.6	2903.8	3005.6	3065.3	3093.4
30°	2756.3	2812.5	2924.8	2995.1	3030.2
32.5°	2654.5	2721.2	2844.1	2921.3	2963.5
35°	2552.7	2626.4	2759.8	2851.1	2893.2
37.5°	2450.8	2524.6	2672.0	2770.3	2823.0
40°	2335.0	2422.7	2580.7	2689.6	2742.3
42.5°	2222.6	2317.4	2485.9	2605.3	2661.5
45°	2099.7	2212.1	2387.6	2521.1	2580.7
47.5°	1987.3	2099.7	2289.3	2429.8	2496.5
50°	1864.5	1983.8	2184.0	2338.5	2408.7
52.5°	1745.1	1868.0	2078.6	2243.7	2313.9
55°	1615.2	1755.6	1969.8	2141.8	2215.6
57.5°	1485.2	1636.2	1857.4	2036.5	2110.2
60°	1358.8	1513.3	1745.1	1924.1	2001.4
62.5°	1232.4	1386.9	1629.2	1811.8	1885.5
65°	1099.0	1260.5	1502.8	1688.9	1762.6
67.5°	965.6	1134.1	1376.4	1562.5	1632.7
70°	825.1	1004.2	1246.5	1429.1	1499.3
72.5°	695.2	874.3	1113.1	1292.1	1358.8
75°	565.3	744.4	976.1	1141.1	1186.8
77.5°	438.9	618.0	825.1	934.0	944.5
80°	319.5	488.1	656.6	688.2	684.7
82.5°	214.2	365.2	452.9	456.5	467.0
85°	122.9	228.2	249.3	245.8	249.3
87.5°	49.2	80.8	70.2	52.7	52.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)