

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: P388353

Luminaire Tested: **24CZ2-120VHE-SQR-UNV-L950-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: P388353
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-SDWPD1-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: 10374.6 lumens
Efficiency: N/A
Efficacy: 124.1 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

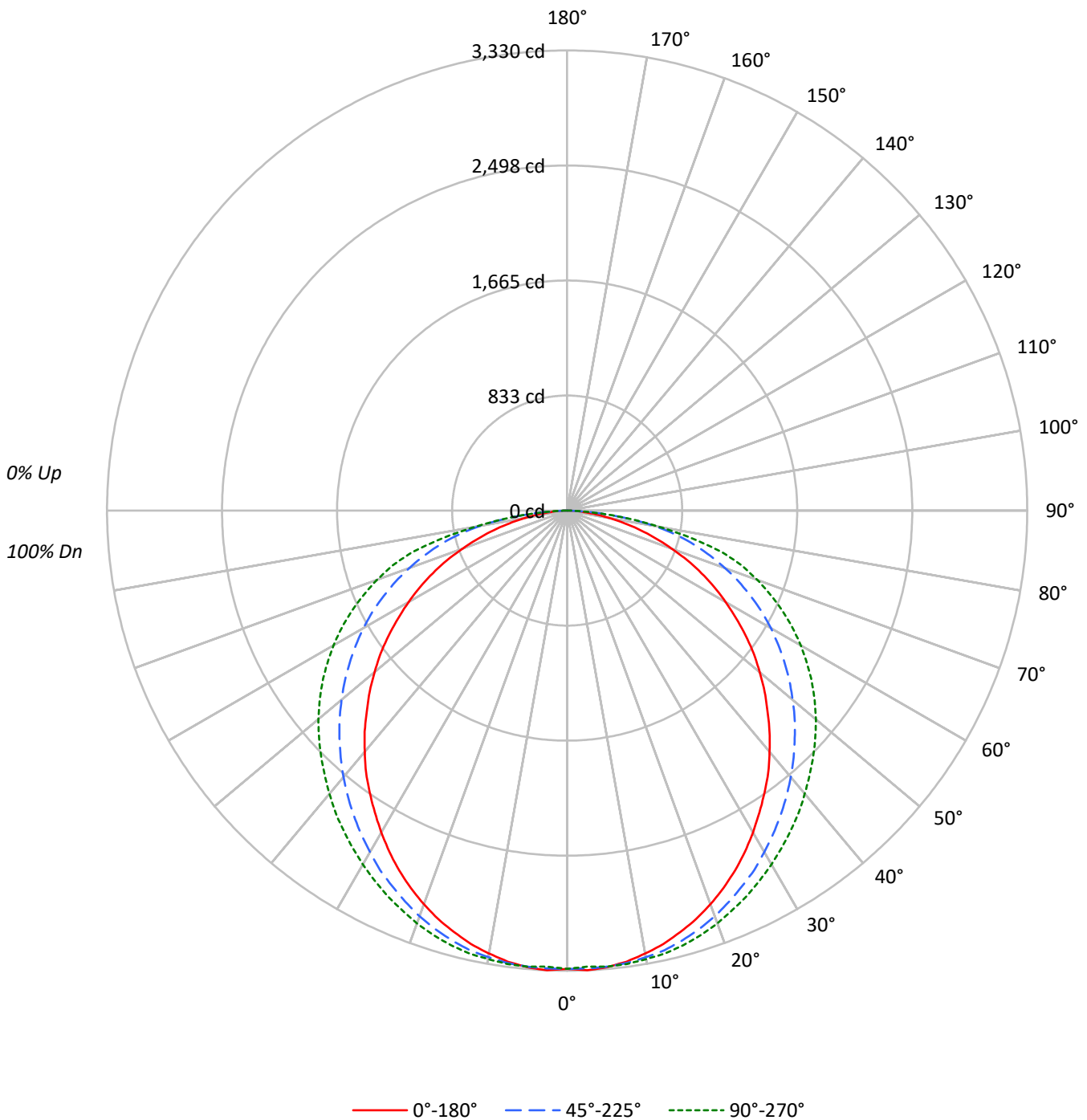
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4462	4462	4462
5°	4479	4474	4474
10°	4447	4484	4503
15°	4400	4486	4534
20°	4341	4474	4552
25°	4267	4450	4567
30°	4178	4434	4593
35°	4091	4423	4637
40°	4001	4423	4699
45°	3898	4433	4791
50°	3808	4460	4919
55°	3697	4508	5071
60°	3568	4582	5255
65°	3414	4668	5475
70°	3167	4784	5755
75°	2868	4951	6019
80°	2416	4964	5176
85°	1851	3754	3754



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	314.8	3.0
10°-20°	905.7	8.7
20°-30°	1375.7	13.3
30°-40°	1673.3	16.1
40°-50°	1781.5	17.2
50°-60°	1696.8	16.4
60°-70°	1419.0	13.7
70°-80°	946.1	9.1
80°-90°	261.8	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°	2596.1	25.0
0°-40°	4269.4	41.2
0°-60°	7747.7	74.7
0°-90°	10374.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10374.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3316	3316	3316	3316	3316	
5°	3316	3296	3313	3313	3313	315
15°	3159	3166	3220	3244	3255	891
25°	2874	2912	2998	3049	3076	1323
35°	2491	2562	2693	2782	2823	1559
45°	2049	2158	2330	2460	2518	1584
55°	1576	1713	1922	2090	2162	1409
65°	1072	1230	1466	1648	1720	1059
75°	552	726	952	1113	1158	584
85°	120	223	243	240	243	145
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3316.2	3316.2	3316.2	3316.2	3316.2
2.5°	3329.9	3305.9	3316.2	3316.2	3302.5
5°	3316.2	3295.7	3312.8	3312.8	3312.8
7.5°	3292.2	3275.1	3302.5	3309.4	3309.4
10°	3254.6	3247.7	3282.0	3292.2	3295.7
12.5°	3213.5	3210.0	3258.0	3271.7	3282.0
15°	3158.6	3165.5	3220.3	3244.3	3254.6
17.5°	3100.4	3114.1	3175.8	3210.0	3220.3
20°	3031.9	3052.4	3124.4	3158.6	3179.2
22.5°	2956.5	2987.3	3062.7	3103.8	3127.8
25°	2874.3	2912.0	2997.6	3049.0	3076.4
27.5°	2785.2	2833.2	2932.5	2990.8	3018.2
30°	2689.3	2744.1	2853.7	2922.3	2956.5
32.5°	2589.9	2655.0	2774.9	2850.3	2891.4
35°	2490.6	2562.5	2692.7	2781.8	2822.9
37.5°	2391.2	2463.2	2607.1	2703.0	2754.4
40°	2278.2	2363.8	2518.0	2624.2	2675.6
42.5°	2168.6	2261.1	2425.5	2542.0	2596.8
45°	2048.7	2158.3	2329.6	2459.8	2518.0
47.5°	1939.0	2048.7	2233.7	2370.7	2435.8
50°	1819.1	1935.6	2130.9	2281.6	2350.1
52.5°	1702.6	1822.6	2028.1	2189.1	2257.6
55°	1575.9	1712.9	1921.9	2089.8	2161.7
57.5°	1449.1	1596.4	1812.3	1987.0	2058.9
60°	1325.8	1476.5	1702.6	1877.4	1952.7
62.5°	1202.5	1353.2	1589.6	1767.7	1839.7
65°	1072.3	1229.9	1466.3	1647.8	1719.8
67.5°	942.1	1106.6	1342.9	1524.5	1593.0
70°	805.1	979.8	1216.2	1394.3	1462.8
72.5°	678.3	853.0	1086.0	1260.7	1325.8
75°	551.6	726.3	952.4	1113.4	1157.9
77.5°	428.2	603.0	805.1	911.3	921.6
80°	311.8	476.2	640.6	671.5	668.0
82.5°	209.0	356.3	441.9	445.4	455.6
85°	119.9	222.7	243.2	239.8	243.2
87.5°	48.0	78.8	68.5	51.4	51.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)