

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: P388635

Luminaire Tested: **24CZ2-120VHE-UNV-L940-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: P388635
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: 24CZ2-120VHE-UNV-L940-CD2-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10177.3 lumens
Efficiency: N/A
Efficacy: 121.7 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

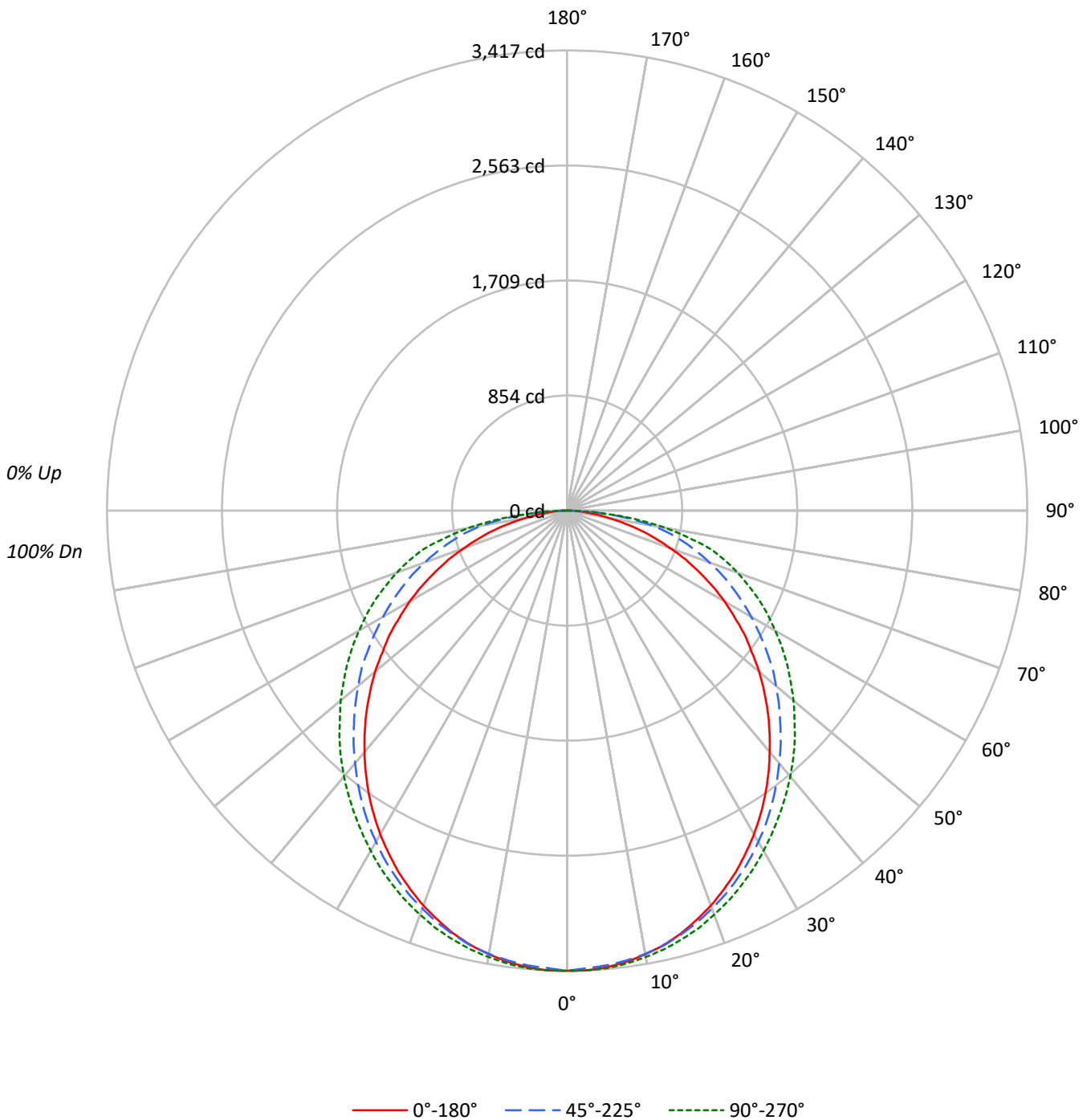
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	4598	4598	4598
5°	4597	4578	4606
10°	4571	4566	4599
15°	4533	4542	4589
20°	4469	4504	4572
25°	4397	4463	4553
30°	4311	4412	4533
35°	4218	4357	4519
40°	4111	4301	4528
45°	4007	4259	4550
50°	3896	4237	4593
55°	3777	4231	4677
60°	3629	4250	4799
65°	3439	4315	5007
70°	3194	4423	5292
75°	2913	4644	5739
80°	2395	5001	5738
85°	1836	4614	4929



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	323.2	3.2
10°-20°	922.6	9.1
20°-30°	1388.4	13.6
30°-40°	1663.8	16.3
40°-50°	1733.9	17.0
50°-60°	1613.2	15.9
60°-70°	1328.6	13.1
70°-80°	904.9	8.9
80°-90°	298.8	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°	2634.2	25.9
0°-40°	4298.0	42.2
0°-60°	7645.1	75.1
0°-90°	10177.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10177.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3417	3417	3417	3417	3417	
5°	3403	3403	3390	3407	3410	323
15°	3254	3257	3261	3291	3295	917
25°	2962	2975	3006	3057	3067	1363
35°	2568	2598	2653	2724	2751	1605
45°	2106	2150	2238	2350	2391	1624
55°	1610	1664	1804	1946	1994	1435
65°	1080	1172	1355	1515	1573	1072
75°	560	686	893	1053	1104	591
85°	119	231	299	319	319	147
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3417.0	3417.0	3417.0	3417.0	3417.0
2.5°	3417.0	3417.0	3400.0	3417.0	3417.0
5°	3403.4	3403.4	3389.8	3406.8	3410.2
7.5°	3379.6	3383.0	3369.4	3389.8	3393.2
10°	3345.7	3349.1	3342.3	3362.6	3366.0
12.5°	3304.9	3308.3	3308.3	3332.1	3335.5
15°	3254.0	3257.4	3260.7	3291.3	3294.7
17.5°	3189.4	3199.6	3206.4	3243.8	3250.6
20°	3121.5	3131.7	3145.3	3186.0	3192.8
22.5°	3043.4	3057.0	3080.7	3124.9	3135.1
25°	2961.8	2975.4	3006.0	3057.0	3067.1
27.5°	2870.1	2890.5	2927.9	2982.2	2995.8
30°	2775.0	2795.4	2839.6	2897.3	2917.7
32.5°	2673.1	2700.3	2751.3	2815.8	2836.2
35°	2567.8	2598.4	2652.8	2724.1	2751.3
37.5°	2455.8	2489.7	2554.3	2632.4	2666.3
40°	2340.3	2381.0	2449.0	2540.7	2578.0
42.5°	2224.8	2262.1	2347.1	2445.6	2486.3
45°	2105.9	2150.1	2238.4	2350.5	2391.2
47.5°	1983.6	2027.8	2133.1	2252.0	2289.3
50°	1861.3	1905.5	2024.4	2150.1	2194.2
52.5°	1728.9	1786.6	1922.5	2048.2	2092.3
55°	1610.0	1664.3	1803.6	1946.3	1993.8
57.5°	1474.1	1538.7	1691.5	1841.0	1891.9
60°	1348.5	1416.4	1579.4	1732.3	1783.2
62.5°	1219.4	1294.1	1467.3	1623.6	1681.3
65°	1080.1	1171.8	1355.2	1514.9	1572.6
67.5°	954.4	1049.6	1243.2	1406.2	1457.1
70°	811.8	927.3	1124.3	1287.3	1345.1
72.5°	689.5	805.0	1012.2	1171.8	1229.6
75°	560.4	686.1	893.3	1053.0	1103.9
77.5°	431.4	570.6	777.8	900.1	917.1
80°	309.1	455.1	645.4	716.7	740.5
82.5°	217.4	349.9	475.5	523.1	536.7
85°	118.9	231.0	298.9	319.3	319.3
87.5°	50.9	98.5	118.9	122.3	125.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)