

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: P391129

Luminaire Tested: **24CZ2-170VHE-HRP-UNV-L935-CD2-SWPD1-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: P391129
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-HRP-UNV-L935-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12063.9 lumens
Efficiency: N/A
Efficacy: 97.8 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

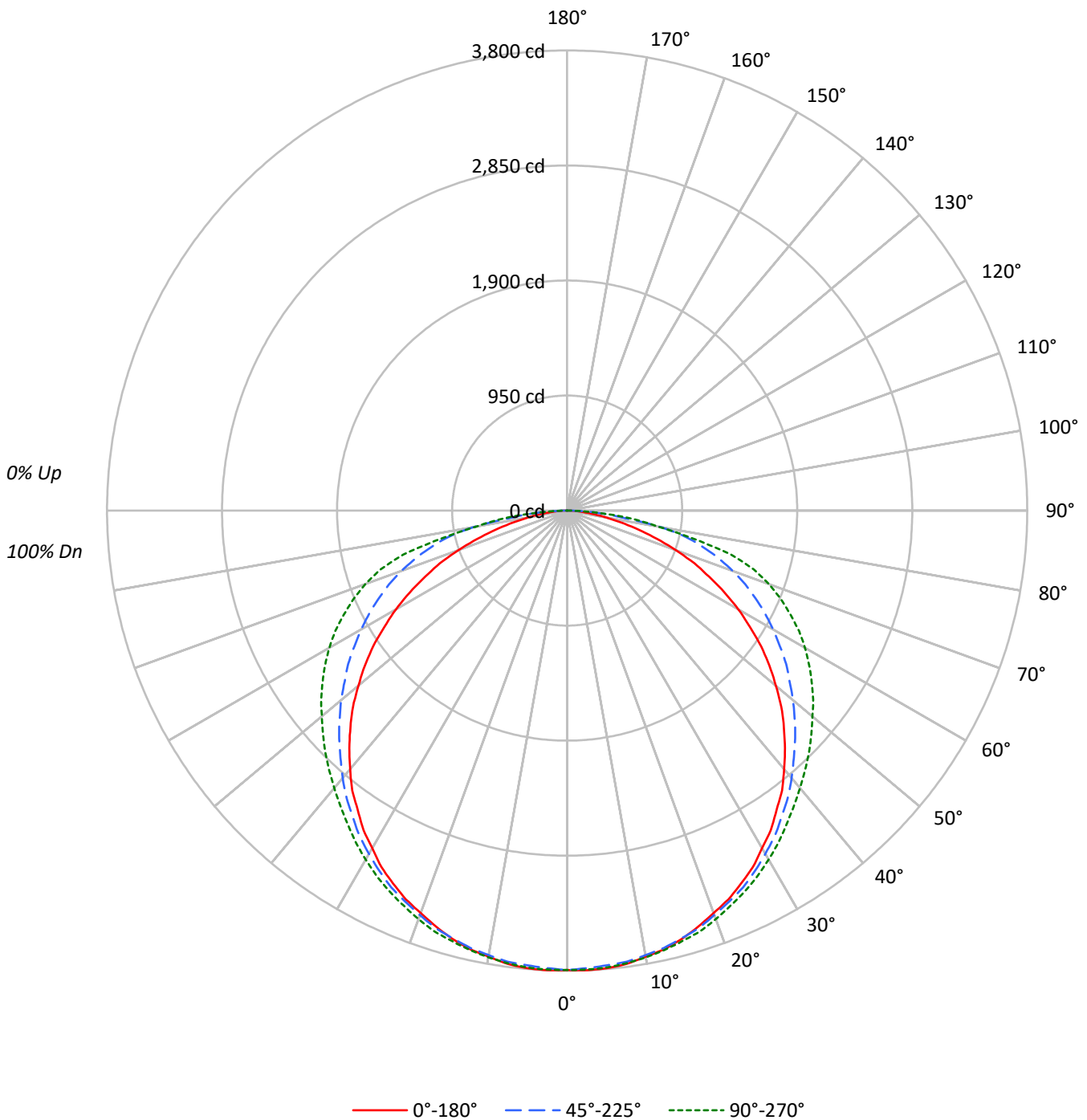
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5105	5105	5105
5°	5124	5092	5116
10°	5110	5093	5118
15°	5101	5093	5126
20°	5064	5089	5141
25°	5046	5099	5152
30°	5002	5085	5169
35°	4954	5072	5190
40°	4898	5066	5255
45°	4816	5067	5374
50°	4710	5098	5536
55°	4590	5180	5783
60°	4396	5282	6103
65°	4115	5468	6477
70°	3743	5720	6968
75°	3173	6035	7279
80°	2503	6074	5888
85°	1848	4619	5173



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	359.9	3.0
10°-20°	1035.7	8.6
20°-30°	1583.8	13.1
30°-40°	1936.2	16.0
40°-50°	2063.6	17.1
50°-60°	1973.1	16.4
60°-70°	1671.4	13.9
70°-80°	1123.4	9.3
80°-90°	316.9	2.6
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°	2979.4	24.7
0°-40°	4915.6	40.7
0°-60°	8952.2	74.2
0°-90°	12063.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12063.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3794	3794	3794	3794	3794	
5°	3794	3788	3770	3788	3788	360
15°	3662	3662	3656	3686	3680	1033
25°	3399	3411	3435	3465	3471	1567
35°	3016	3040	3088	3148	3160	1889
45°	2531	2573	2663	2776	2824	1952
55°	1957	2028	2208	2382	2465	1743
65°	1292	1424	1717	1945	2034	1283
75°	610	832	1161	1358	1400	654
85°	120	245	299	323	335	148
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3793.8	3793.8	3793.8	3793.8	3793.8
2.5°	3799.7	3799.7	3781.8	3793.8	3793.8
5°	3793.8	3787.8	3769.8	3787.8	3787.8
7.5°	3775.8	3769.8	3757.8	3775.8	3769.8
10°	3739.9	3739.9	3727.9	3745.9	3745.9
12.5°	3710.0	3704.0	3698.0	3721.9	3716.0
15°	3662.1	3662.1	3656.1	3686.0	3680.1
17.5°	3602.3	3608.3	3614.2	3638.2	3644.2
20°	3536.4	3548.4	3554.4	3590.3	3590.3
22.5°	3476.6	3482.6	3494.6	3530.5	3530.5
25°	3398.8	3410.8	3434.7	3464.6	3470.6
27.5°	3321.0	3327.0	3356.9	3398.8	3404.8
30°	3219.3	3237.3	3273.2	3321.0	3327.0
32.5°	3129.5	3147.5	3189.4	3237.3	3249.2
35°	3015.9	3039.8	3087.7	3147.5	3159.5
37.5°	2914.1	2932.1	2991.9	3057.7	3075.7
40°	2788.5	2824.4	2884.2	2962.0	2991.9
42.5°	2662.8	2698.7	2770.5	2872.2	2908.1
45°	2531.2	2573.0	2662.8	2776.5	2824.4
47.5°	2399.5	2447.4	2549.1	2680.8	2734.6
50°	2249.9	2309.8	2435.4	2585.0	2644.9
52.5°	2106.3	2178.1	2315.7	2483.3	2561.1
55°	1956.7	2028.5	2208.0	2381.6	2465.3
57.5°	1789.2	1884.9	2082.4	2279.8	2369.6
60°	1633.6	1723.3	1962.7	2178.1	2267.9
62.5°	1466.0	1585.7	1843.0	2070.4	2160.2
65°	1292.5	1424.2	1717.4	1944.7	2034.5
67.5°	1136.9	1280.5	1591.7	1819.1	1908.8
70°	951.4	1130.9	1454.1	1681.5	1771.2
72.5°	777.9	975.4	1310.5	1531.9	1615.6
75°	610.4	831.8	1160.9	1358.3	1400.2
77.5°	454.8	688.1	1005.3	1089.1	1059.1
80°	323.1	550.5	783.9	742.0	759.9
82.5°	209.4	418.9	484.7	550.5	568.5
85°	119.7	245.3	299.2	323.1	335.1
87.5°	53.9	89.8	119.7	119.7	113.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)