

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: P391128

Luminaire Tested: **24CZ2-170VHE-HRP-UNV-L935-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: P391128
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-SDWPD1-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: 11918.4 lumens
Efficiency: N/A
Efficacy: 96.6 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

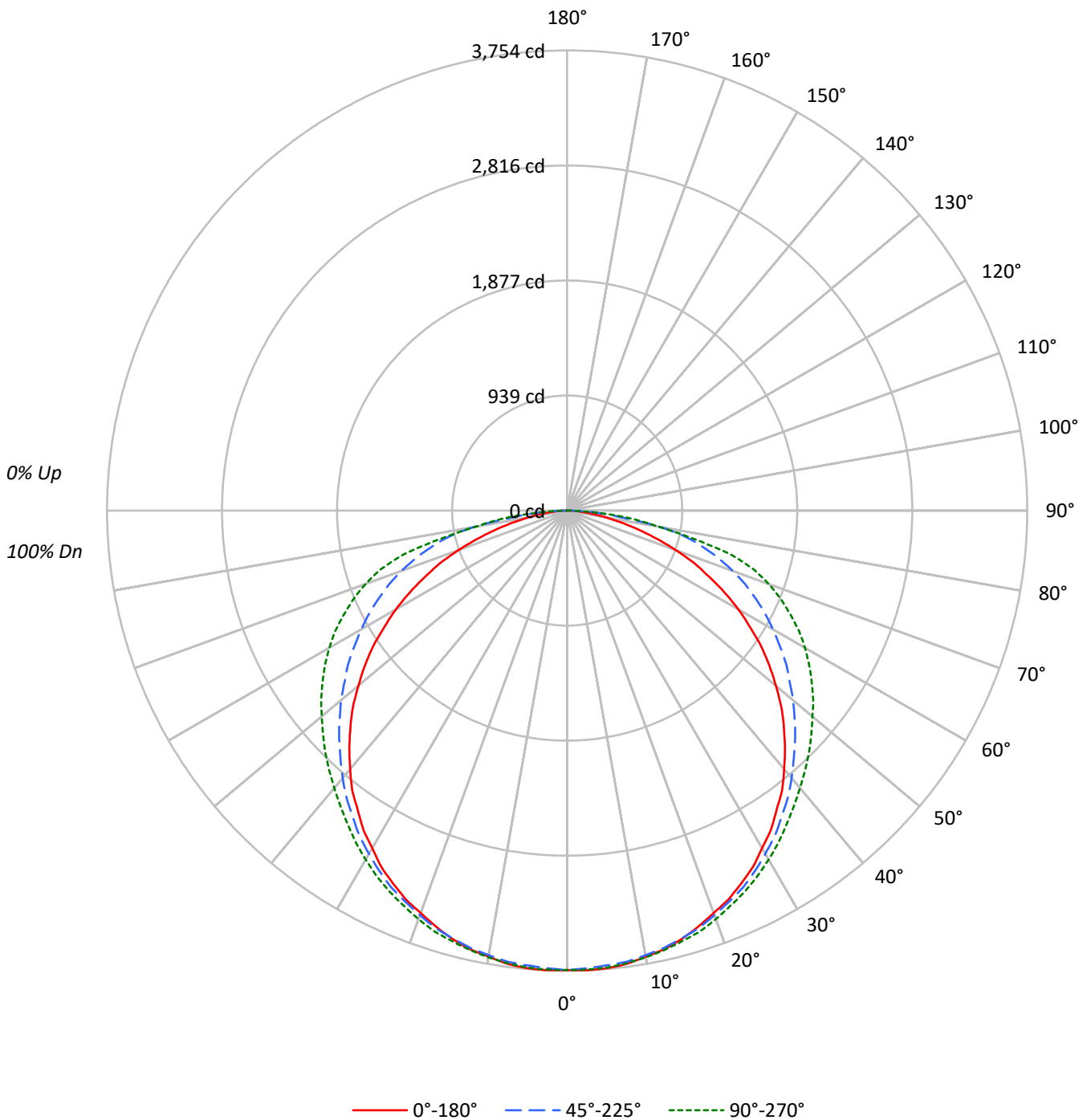
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5043	5043	5043
5°	5062	5030	5054
10°	5048	5032	5056
15°	5040	5031	5064
20°	5003	5028	5079
25°	4985	5038	5090
30°	4941	5024	5107
35°	4894	5010	5127
40°	4839	5005	5192
45°	4758	5006	5309
50°	4653	5036	5470
55°	4535	5117	5713
60°	4343	5218	6029
65°	4065	5401	6399
70°	3698	5651	6884
75°	3135	5962	7191
80°	2473	6000	5817
85°	1825	4563	5111



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	355.5	3.0
10°-20°	1023.2	8.6
20°-30°	1564.7	13.1
30°-40°	1912.8	16.0
40°-50°	2038.7	17.1
50°-60°	1949.3	16.4
60°-70°	1651.3	13.9
70°-80°	1109.8	9.3
80°-90°	313.0	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°	2943.5	24.7
0°-40°	4856.3	40.7
0°-60°	8844.3	74.2
0°-90°	11918.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11918.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3748	3748	3748	3748	3748	
5°	3748	3742	3724	3742	3742	356
15°	3618	3618	3612	3642	3636	1020
25°	3358	3370	3393	3423	3429	1548
35°	2980	3003	3050	3110	3121	1867
45°	2501	2542	2631	2743	2790	1929
55°	1933	2004	2181	2353	2436	1722
65°	1277	1407	1697	1921	2010	1268
75°	603	822	1147	1342	1383	646
85°	118	242	296	319	331	146
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3748.0	3748.0	3748.0	3748.0	3748.0
2.5°	3753.9	3753.9	3736.2	3748.0	3748.0
5°	3748.0	3742.1	3724.3	3742.1	3742.1
7.5°	3730.3	3724.3	3712.5	3730.3	3724.3
10°	3694.8	3694.8	3683.0	3700.7	3700.7
12.5°	3665.2	3659.3	3653.4	3677.1	3671.1
15°	3617.9	3617.9	3612.0	3641.6	3635.7
17.5°	3558.8	3564.7	3570.6	3594.3	3600.2
20°	3493.8	3505.6	3511.5	3547.0	3547.0
22.5°	3434.7	3440.6	3452.4	3487.9	3487.9
25°	3357.8	3369.6	3393.3	3422.9	3428.8
27.5°	3281.0	3286.9	3316.4	3357.8	3363.7
30°	3180.5	3198.2	3233.7	3281.0	3286.9
32.5°	3091.8	3109.5	3150.9	3198.2	3210.0
35°	2979.5	3003.1	3050.4	3109.5	3121.4
37.5°	2879.0	2896.7	2955.8	3020.9	3038.6
40°	2754.8	2790.3	2849.4	2926.3	2955.8
42.5°	2630.7	2666.2	2737.1	2837.6	2873.1
45°	2500.6	2542.0	2630.7	2743.0	2790.3
47.5°	2370.6	2417.9	2518.4	2648.4	2701.6
50°	2222.8	2281.9	2406.0	2553.8	2613.0
52.5°	2080.9	2151.8	2287.8	2453.3	2530.2
55°	1933.1	2004.1	2181.4	2352.8	2435.6
57.5°	1767.6	1862.2	2057.3	2252.3	2341.0
60°	1613.9	1702.6	1939.0	2151.8	2240.5
62.5°	1448.4	1566.6	1820.8	2045.4	2134.1
65°	1276.9	1407.0	1696.6	1921.3	2010.0
67.5°	1123.2	1265.1	1572.5	1797.1	1885.8
70°	940.0	1117.3	1436.5	1661.2	1749.9
72.5°	768.5	963.6	1294.7	1513.4	1596.1
75°	603.0	821.7	1146.9	1341.9	1383.3
77.5°	449.3	679.8	993.2	1075.9	1046.4
80°	319.2	543.9	774.4	733.0	750.8
82.5°	206.9	413.8	478.8	543.9	561.6
85°	118.2	242.4	295.6	319.2	331.1
87.5°	53.2	88.7	118.2	118.2	112.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)