

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: P391130

Luminaire Tested: **24CZ2-170VHE-HRP-UNV-L935-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: P391130
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-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: 12215.5 lumens
Efficiency: N/A
Efficacy: 99.0 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

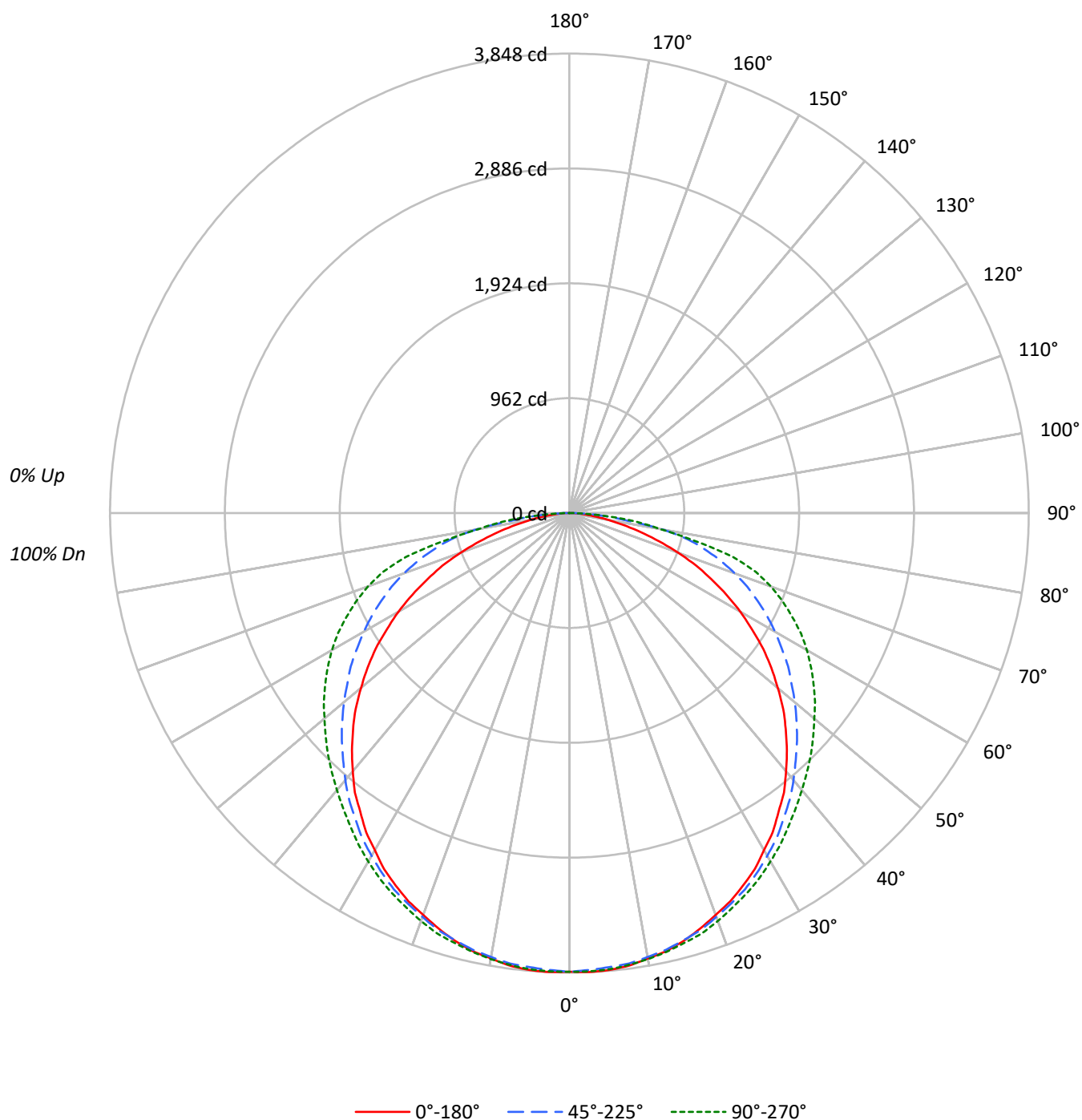
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5169	5169	5169
5°	5188	5156	5180
10°	5174	5157	5182
15°	5165	5157	5191
20°	5127	5153	5205
25°	5109	5163	5217
30°	5065	5149	5234
35°	5016	5135	5255
40°	4959	5130	5321
45°	4877	5131	5442
50°	4769	5162	5606
55°	4648	5245	5856
60°	4451	5348	6180
65°	4167	5536	6559
70°	3790	5792	7056
75°	3213	6111	7371
80°	2535	6150	5962
85°	1871	4678	5238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	364.4	3.0
10°-20°	1048.7	8.6
20°-30°	1603.7	13.1
30°-40°	1960.5	16.0
40°-50°	2089.5	17.1
50°-60°	1997.9	16.4
60°-70°	1692.4	13.9
70°-80°	1137.4	9.3
80°-90°	320.9	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°	3016.8	24.7
0°-40°	4977.4	40.7
0°-60°	9064.8	74.2
0°-90°	12215.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12215.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3841	3841	3841	3841	3841	
5°	3841	3835	3817	3835	3835	365
15°	3708	3708	3702	3732	3726	1046
25°	3442	3454	3478	3508	3514	1586
35°	3054	3078	3126	3187	3199	1913
45°	2563	2605	2696	2811	2860	1977
55°	1981	2054	2236	2412	2496	1765
65°	1309	1442	1739	1969	2060	1299
75°	618	842	1176	1375	1418	662
85°	121	248	303	327	339	150
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3841.4	3841.4	3841.4	3841.4	3841.4
2.5°	3847.5	3847.5	3829.3	3841.4	3841.4
5°	3841.4	3835.4	3817.2	3835.4	3835.4
7.5°	3823.2	3817.2	3805.1	3823.2	3817.2
10°	3786.9	3786.9	3774.8	3793.0	3793.0
12.5°	3756.6	3750.5	3744.5	3768.7	3762.7
15°	3708.1	3708.1	3702.1	3732.4	3726.3
17.5°	3647.5	3653.6	3659.7	3683.9	3690.0
20°	3580.9	3593.0	3599.1	3635.4	3635.4
22.5°	3520.3	3526.4	3538.5	3574.8	3574.8
25°	3441.5	3453.6	3477.9	3508.2	3514.2
27.5°	3362.8	3368.8	3399.1	3441.5	3447.6
30°	3259.8	3277.9	3314.3	3362.8	3368.8
32.5°	3168.9	3187.1	3229.5	3277.9	3290.1
35°	3053.8	3078.0	3126.5	3187.1	3199.2
37.5°	2950.7	2968.9	3029.5	3096.2	3114.3
40°	2823.5	2859.9	2920.5	2999.2	3029.5
42.5°	2696.3	2732.6	2805.3	2908.3	2944.7
45°	2563.0	2605.4	2696.3	2811.4	2859.9
47.5°	2429.7	2478.1	2581.1	2714.4	2769.0
50°	2278.2	2338.8	2466.0	2617.5	2678.1
52.5°	2132.8	2205.5	2344.8	2514.5	2593.3
55°	1981.3	2054.0	2235.8	2411.5	2496.3
57.5°	1811.7	1908.6	2108.5	2308.5	2399.4
60°	1654.1	1745.0	1987.4	2205.5	2296.4
62.5°	1484.5	1605.6	1866.2	2096.4	2187.3
65°	1308.8	1442.0	1738.9	1969.2	2060.1
67.5°	1151.2	1296.6	1611.7	1841.9	1932.8
70°	963.4	1145.2	1472.3	1702.6	1793.5
72.5°	787.7	987.6	1326.9	1551.1	1635.9
75°	618.0	842.2	1175.5	1375.4	1417.8
77.5°	460.5	696.8	1017.9	1102.7	1072.4
80°	327.2	557.4	793.7	751.3	769.5
82.5°	212.1	424.1	490.8	557.4	575.6
85°	121.2	248.4	303.0	327.2	339.3
87.5°	54.5	90.9	121.2	121.2	115.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)