

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: P388701

Luminaire Tested: **24CZ2-170VHE-UNV-L930-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: P388701
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: 24CZ2-170VHE-UNV-L930-CD2-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13702.1 lumens
Efficiency: N/A
Efficacy: 111.0 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

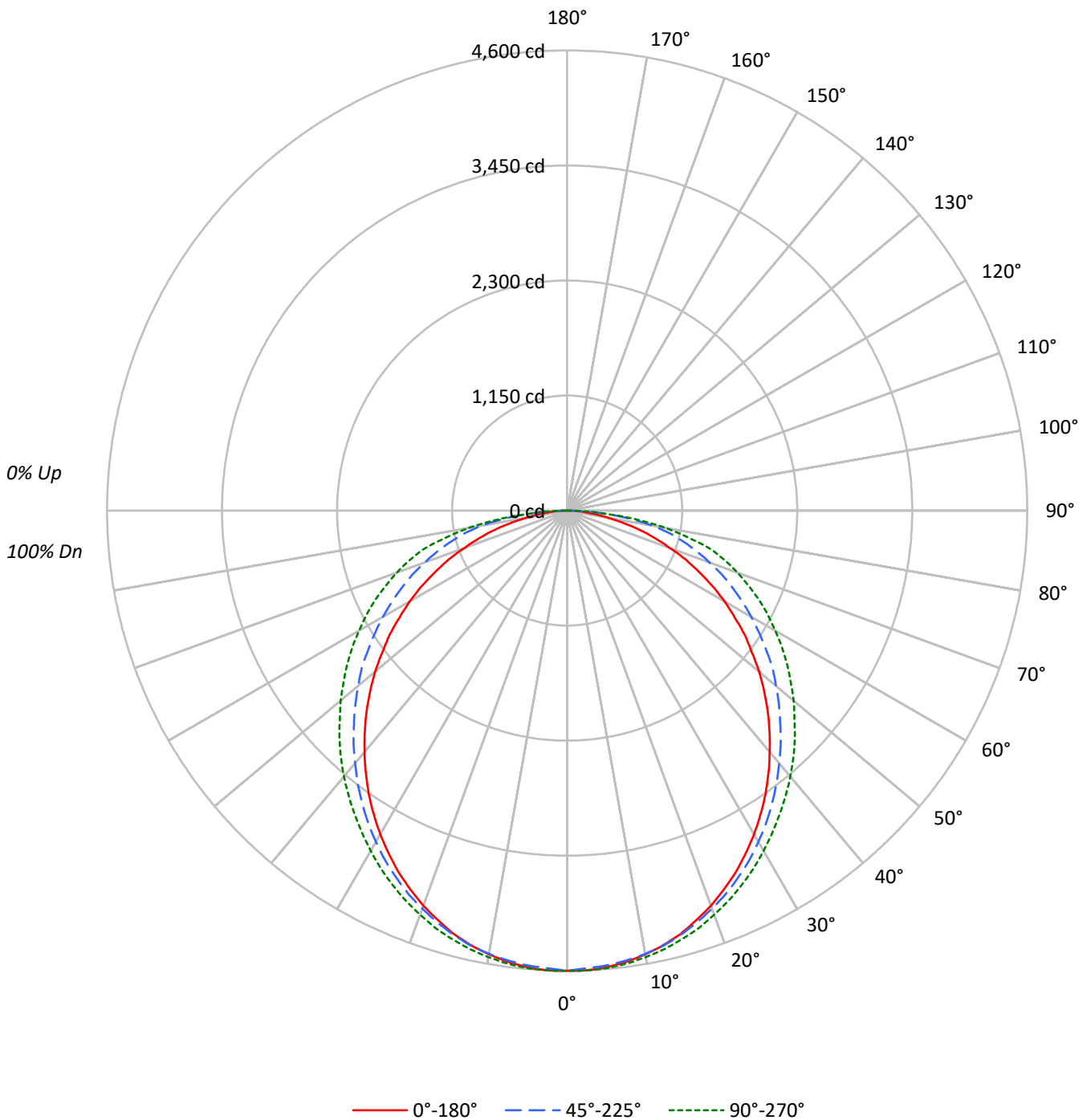
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	6190	6190	6190
5°	6189	6164	6201
10°	6154	6148	6192
15°	6102	6115	6179
20°	6017	6063	6155
25°	5920	6008	6130
30°	5805	5940	6103
35°	5679	5866	6084
40°	5534	5791	6096
45°	5395	5734	6126
50°	5246	5705	6184
55°	5085	5696	6297
60°	4885	5722	6461
65°	4630	5809	6741
70°	4299	5955	7124
75°	3922	6252	7726
80°	3224	6733	7724
85°	2472	6212	6637



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	435.1	3.2
10°-20°	1242.1	9.1
20°-30°	1869.2	13.6
30°-40°	2240.1	16.3
40°-50°	2334.4	17.0
50°-60°	2171.9	15.9
60°-70°	1788.8	13.1
70°-80°	1218.3	8.9
80°-90°	402.2	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°	3546.5	25.9
0°-40°	5786.5	42.2
0°-60°	10292.8	75.1
0°-90°	13702.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13702.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4600	4600	4600	4600	4600	
5°	4582	4582	4564	4587	4591	435
15°	4381	4386	4390	4431	4436	1234
25°	3988	4006	4047	4116	4129	1836
35°	3457	3498	3572	3668	3704	2161
45°	2835	2895	3014	3164	3219	2187
55°	2168	2241	2428	2620	2684	1932
65°	1454	1578	1825	2040	2117	1443
75°	754	924	1203	1418	1486	796
85°	160	311	402	430	430	198
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4600.4	4600.4	4600.4	4600.4	4600.4
2.5°	4600.4	4600.4	4577.6	4600.4	4600.4
5°	4582.1	4582.1	4563.8	4586.7	4591.3
7.5°	4550.1	4554.7	4536.4	4563.8	4568.4
10°	4504.4	4509.0	4499.8	4527.3	4531.8
12.5°	4449.5	4454.1	4454.1	4486.1	4490.7
15°	4380.9	4385.5	4390.1	4431.2	4435.8
17.5°	4294.0	4307.8	4316.9	4367.2	4376.4
20°	4202.6	4216.3	4234.6	4289.5	4298.6
22.5°	4097.4	4115.7	4147.7	4207.2	4220.9
25°	3987.7	4005.9	4047.1	4115.7	4129.4
27.5°	3864.2	3891.6	3941.9	4015.1	4033.4
30°	3736.1	3763.6	3823.0	3900.8	3928.2
32.5°	3598.9	3635.5	3704.1	3791.0	3818.5
35°	3457.2	3498.3	3571.5	3667.5	3704.1
37.5°	3306.3	3352.0	3438.9	3544.1	3589.8
40°	3150.8	3205.7	3297.1	3420.6	3470.9
42.5°	2995.3	3045.6	3159.9	3292.6	3347.4
45°	2835.3	2894.7	3013.6	3164.5	3219.4
47.5°	2670.6	2730.1	2871.8	3031.9	3082.2
50°	2506.0	2565.4	2725.5	2894.7	2954.2
52.5°	2327.7	2405.4	2588.3	2757.5	2817.0
55°	2167.6	2240.8	2428.3	2620.3	2684.3
57.5°	1984.7	2071.6	2277.4	2478.6	2547.2
60°	1815.5	1906.9	2126.4	2332.2	2400.8
62.5°	1641.7	1742.3	1975.5	2185.9	2263.6
65°	1454.2	1577.7	1824.6	2039.6	2117.3
67.5°	1285.0	1413.1	1673.7	1893.2	1961.8
70°	1092.9	1248.4	1513.7	1733.2	1810.9
72.5°	928.3	1083.8	1362.8	1577.7	1655.4
75°	754.5	923.7	1202.7	1417.6	1486.2
77.5°	580.8	768.3	1047.2	1211.8	1234.7
80°	416.1	612.8	868.9	964.9	996.9
82.5°	292.7	471.0	640.2	704.2	722.5
85°	160.1	311.0	402.4	429.9	429.9
87.5°	68.6	132.6	160.1	164.6	169.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)