

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: P388417

Luminaire Tested: **24CZ2-170VHE-SQR-UNV-L930-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: P388417
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)
Test Lab: INNOVATION CENTER (G2)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-SQR-UNV-L930-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13319.8 lumens
Efficiency: N/A
Efficacy: 107.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

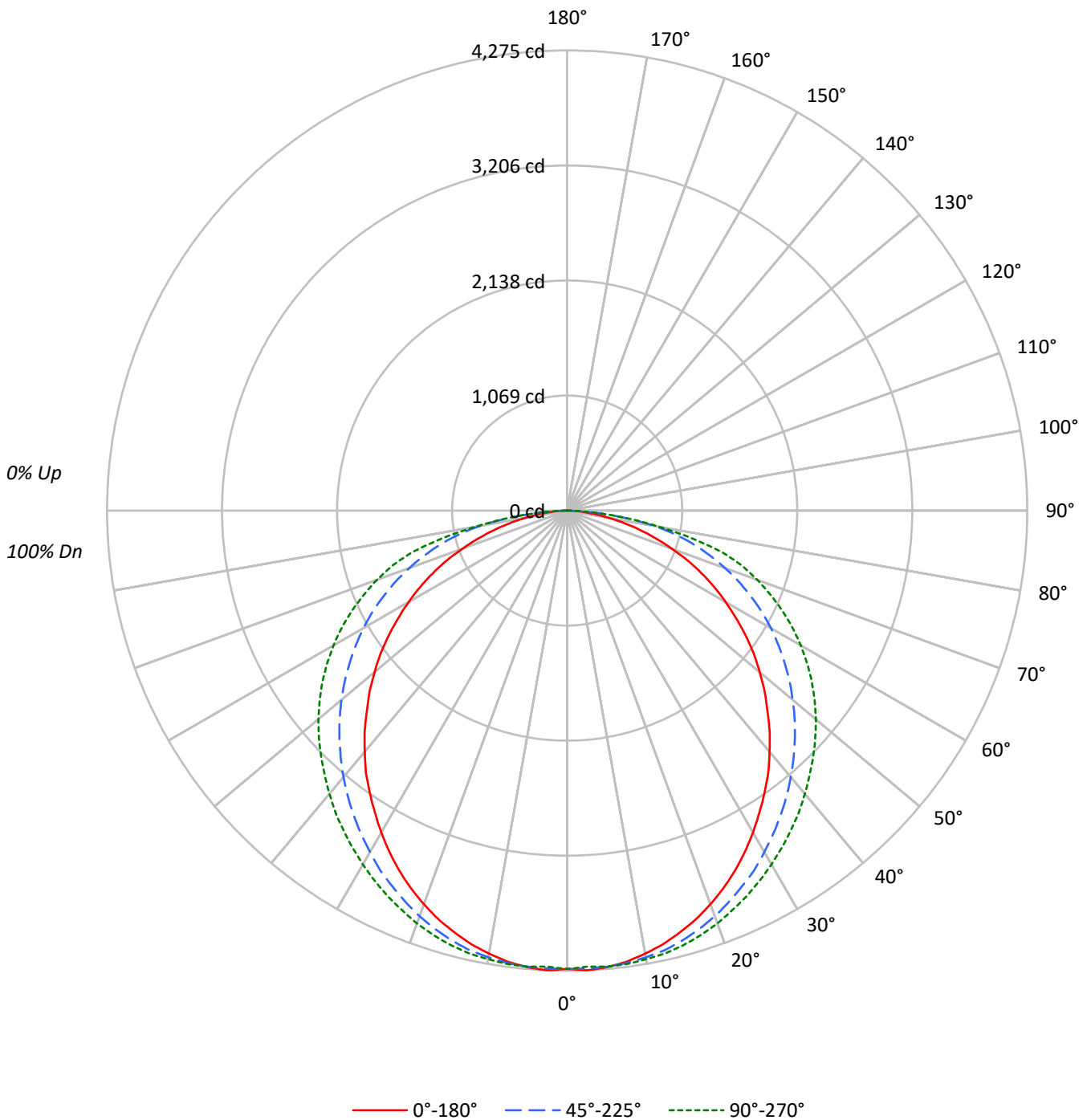
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P388417

CATALOG NUMBER: 24CZ2-170VHE-SQR-UNV-L930-CD2-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P388417

CATALOG NUMBER: 24CZ2-170VHE-SQR-UNV-L930-CD2-SWPD1-U

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	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5729	5729	5729
5°	5751	5745	5745
10°	5709	5757	5781
15°	5649	5759	5820
20°	5574	5744	5844
25°	5479	5714	5864
30°	5364	5692	5897
35°	5252	5678	5953
40°	5137	5678	6034
45°	5005	5691	6151
50°	4889	5727	6316
55°	4746	5788	6511
60°	4581	5882	6747
65°	4383	5993	7030
70°	4066	6142	7388
75°	3681	6357	7729
80°	3102	6373	6646
85°	2376	4821	4821



TEST NUMBER: P388417

CATALOG NUMBER: 24CZ2-170VHE-SQR-UNV-L930-CD2-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	404.1	3.0
10°-20°	1162.8	8.7
20°-30°	1766.2	13.3
30°-40°	2148.3	16.1
40°-50°	2287.3	17.2
50°-60°	2178.5	16.4
60°-70°	1821.8	13.7
70°-80°	1214.7	9.1
80°-90°	336.1	2.5
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°	3333.1	25.0
0°-40°	5481.4	41.2
0°-60°	9947.2	74.7
0°-90°	13319.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13319.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4258	4258	4258	4258	4258	
5°	4258	4231	4253	4253	4253	404
15°	4055	4064	4134	4165	4178	1144
25°	3690	3739	3849	3915	3950	1699
35°	3198	3290	3457	3572	3624	2001
45°	2630	2771	2991	3158	3233	2033
55°	2023	2199	2468	2683	2775	1809
65°	1377	1579	1882	2116	2208	1360
75°	708	932	1223	1430	1487	750
85°	154	286	312	308	312	186
90°	0	0	0	0	0	



TEST NUMBER: P388417

CATALOG NUMBER: 24CZ2-170VHE-SQR-UNV-L930-CD2-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4257.7	4257.7	4257.7	4257.7	4257.7
2.5°	4275.2	4244.5	4257.7	4257.7	4240.1
5°	4257.7	4231.3	4253.3	4253.3	4253.3
7.5°	4226.9	4204.9	4240.1	4248.9	4248.9
10°	4178.5	4169.7	4213.7	4226.9	4231.3
12.5°	4125.7	4121.3	4182.9	4200.5	4213.7
15°	4055.3	4064.1	4134.5	4165.3	4178.5
17.5°	3980.6	3998.2	4077.3	4121.3	4134.5
20°	3892.6	3919.0	4011.3	4055.3	4081.7
22.5°	3795.8	3835.4	3932.2	3985.0	4015.7
25°	3690.3	3738.6	3848.6	3914.6	3949.8
27.5°	3575.9	3637.5	3765.0	3839.8	3875.0
30°	3452.7	3523.1	3663.9	3751.8	3795.8
32.5°	3325.2	3408.8	3562.7	3659.5	3712.3
35°	3197.6	3290.0	3457.1	3571.5	3624.3
37.5°	3070.1	3162.5	3347.2	3470.3	3536.3
40°	2924.9	3034.9	3232.8	3369.2	3435.2
42.5°	2784.2	2902.9	3114.1	3263.6	3334.0
45°	2630.2	2771.0	2990.9	3158.1	3232.8
47.5°	2489.5	2630.2	2867.8	3043.7	3127.3
50°	2335.6	2485.1	2735.8	2929.3	3017.3
52.5°	2186.0	2340.0	2603.9	2810.6	2898.5
55°	2023.3	2199.2	2467.5	2683.0	2775.4
57.5°	1860.5	2049.7	2326.8	2551.1	2643.4
60°	1702.2	1895.7	2186.0	2410.3	2507.1
62.5°	1543.8	1737.4	2040.9	2269.6	2361.9
65°	1376.7	1579.0	1882.5	2115.6	2208.0
67.5°	1209.6	1420.7	1724.2	1957.3	2045.3
70°	1033.6	1257.9	1561.4	1790.2	1878.1
72.5°	870.9	1095.2	1394.3	1618.6	1702.2
75°	708.1	932.5	1222.8	1429.5	1486.7
77.5°	549.8	774.1	1033.6	1170.0	1183.2
80°	400.3	611.4	822.5	862.1	857.7
82.5°	268.3	457.4	567.4	571.8	585.0
85°	153.9	285.9	312.3	307.9	312.3
87.5°	61.6	101.2	88.0	66.0	66.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)