

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: P389641

Luminaire Tested: **24CZ2-170VHE-S-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: P389641
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-S-UNV-L935-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14933.4 lumens
Efficiency: N/A
Efficacy: 121.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

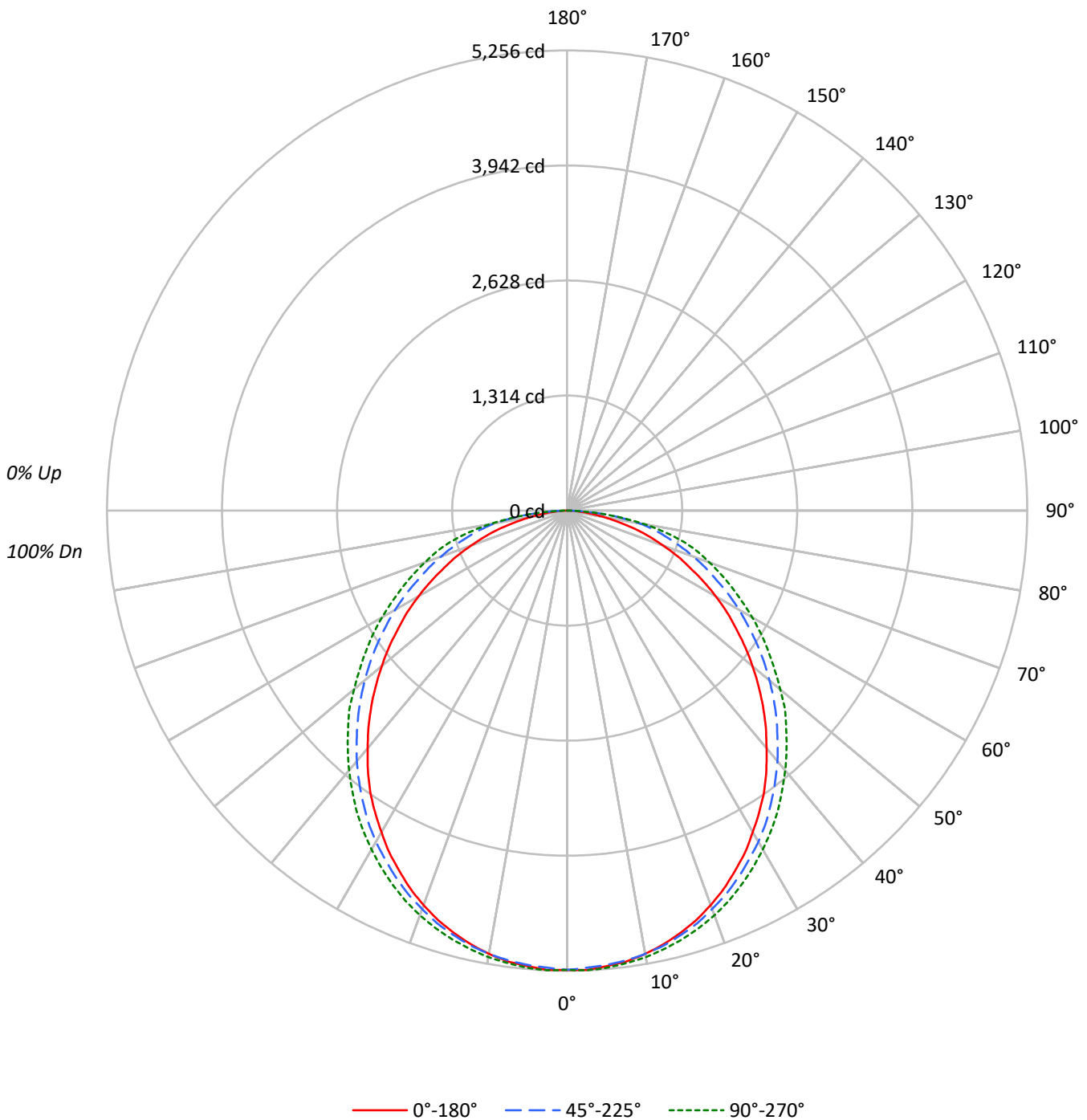
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P389641

CATALOG NUMBER: 24CZ2-170VHE-S-UNV-L935-CD2-SWPD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P389641

CATALOG NUMBER: 24CZ2-170VHE-S-UNV-L935-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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7059	7059	7059
5°	7054	7034	7079
10°	7025	7025	7077
15°	6958	6991	7063
20°	6867	6934	7043
25°	6739	6866	7000
30°	6588	6787	6942
35°	6443	6677	6887
40°	6223	6565	6807
45°	6020	6435	6733
50°	5789	6315	6652
55°	5530	6198	6587
60°	5272	6101	6574
65°	4938	5995	6614
70°	4572	6027	6792
75°	4093	6140	7176
80°	3308	6506	7020
85°	2490	5712	5565



TEST NUMBER: P389641

CATALOG NUMBER: 24CZ2-170VHE-S-UNV-L935-CD2-SWPD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	496.7	3.3
10°-20°	1419.1	9.5
20°-30°	2133.3	14.3
30°-40°	2541.1	17.0
40°-50°	2600.7	17.4
50°-60°	2341.4	15.7
60°-70°	1838.7	12.3
70°-80°	1193.4	8.0
80°-90°	369.1	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°	4049.1	27.1
0°-40°	6590.2	44.1
0°-60°	11532.2	77.2
0°-90°	14933.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14933.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5246	5246	5246	5246	5246	
5°	5222	5232	5208	5237	5242	496
15°	4995	5009	5018	5061	5071	1408
25°	4539	4577	4625	4701	4715	2091
35°	3923	3970	4065	4165	4193	2447
45°	3164	3240	3382	3510	3539	2439
55°	2358	2462	2642	2780	2808	2113
65°	1551	1670	1883	2040	2078	1544
75°	787	939	1181	1342	1380	833
85°	161	299	370	360	360	195
90°	0	0	0	0	0	



TEST NUMBER: P389641

CATALOG NUMBER: 24CZ2-170VHE-S-UNV-L935-CD2-SWPD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5246.2	5246.2	5246.2	5246.2	5246.2
2.5°	5250.9	5250.9	5227.2	5250.9	5255.7
5°	5222.5	5232.0	5208.3	5236.7	5241.5
7.5°	5194.0	5194.0	5179.8	5208.3	5213.0
10°	5141.8	5146.6	5141.8	5175.0	5179.8
12.5°	5075.4	5084.9	5089.7	5122.9	5127.6
15°	4994.8	5009.0	5018.5	5061.2	5070.7
17.5°	4904.7	4918.9	4942.6	4990.1	4999.5
20°	4795.6	4814.6	4843.0	4904.7	4918.9
22.5°	4677.0	4696.0	4743.4	4800.3	4824.0
25°	4539.4	4577.4	4624.8	4700.7	4714.9
27.5°	4401.9	4435.1	4496.7	4577.4	4596.4
30°	4240.6	4292.8	4368.7	4449.3	4468.3
32.5°	4084.1	4136.2	4226.4	4311.8	4335.5
35°	3922.8	3970.2	4065.1	4164.7	4193.2
37.5°	3737.8	3799.5	3903.8	4003.4	4031.9
40°	3543.3	3619.2	3737.8	3842.2	3875.4
42.5°	3358.3	3439.0	3557.6	3671.4	3709.3
45°	3163.8	3239.7	3382.0	3510.1	3538.6
47.5°	2964.6	3050.0	3201.8	3329.9	3377.3
50°	2765.4	2855.5	3016.8	3149.6	3178.1
52.5°	2566.2	2661.0	2831.8	2974.1	2988.3
55°	2357.5	2461.8	2642.1	2779.6	2808.1
57.5°	2167.7	2257.9	2452.3	2594.6	2627.8
60°	1959.0	2058.6	2267.3	2400.2	2442.9
62.5°	1759.8	1864.2	2082.4	2215.2	2253.1
65°	1551.1	1669.7	1883.1	2039.7	2077.6
67.5°	1370.8	1484.7	1712.4	1864.2	1902.1
70°	1162.1	1290.2	1532.1	1688.7	1726.6
72.5°	981.9	1114.7	1356.6	1508.4	1565.3
75°	787.4	939.2	1181.1	1342.4	1380.3
77.5°	597.7	773.2	1019.8	1143.2	1143.2
80°	426.9	611.9	839.6	896.5	906.0
82.5°	279.9	460.1	621.4	616.6	616.6
85°	161.3	298.8	370.0	360.5	360.5
87.5°	61.7	123.3	132.8	132.8	128.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)