

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: P389954

Luminaire Tested: **24CZ2-85VHE-S-UNV-L935-CD1-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: P389954
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: 24CZ2-85VHE-S-UNV-L935-CD1-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: 7640.0 lumens
Efficiency: N/A
Efficacy: 132.0 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

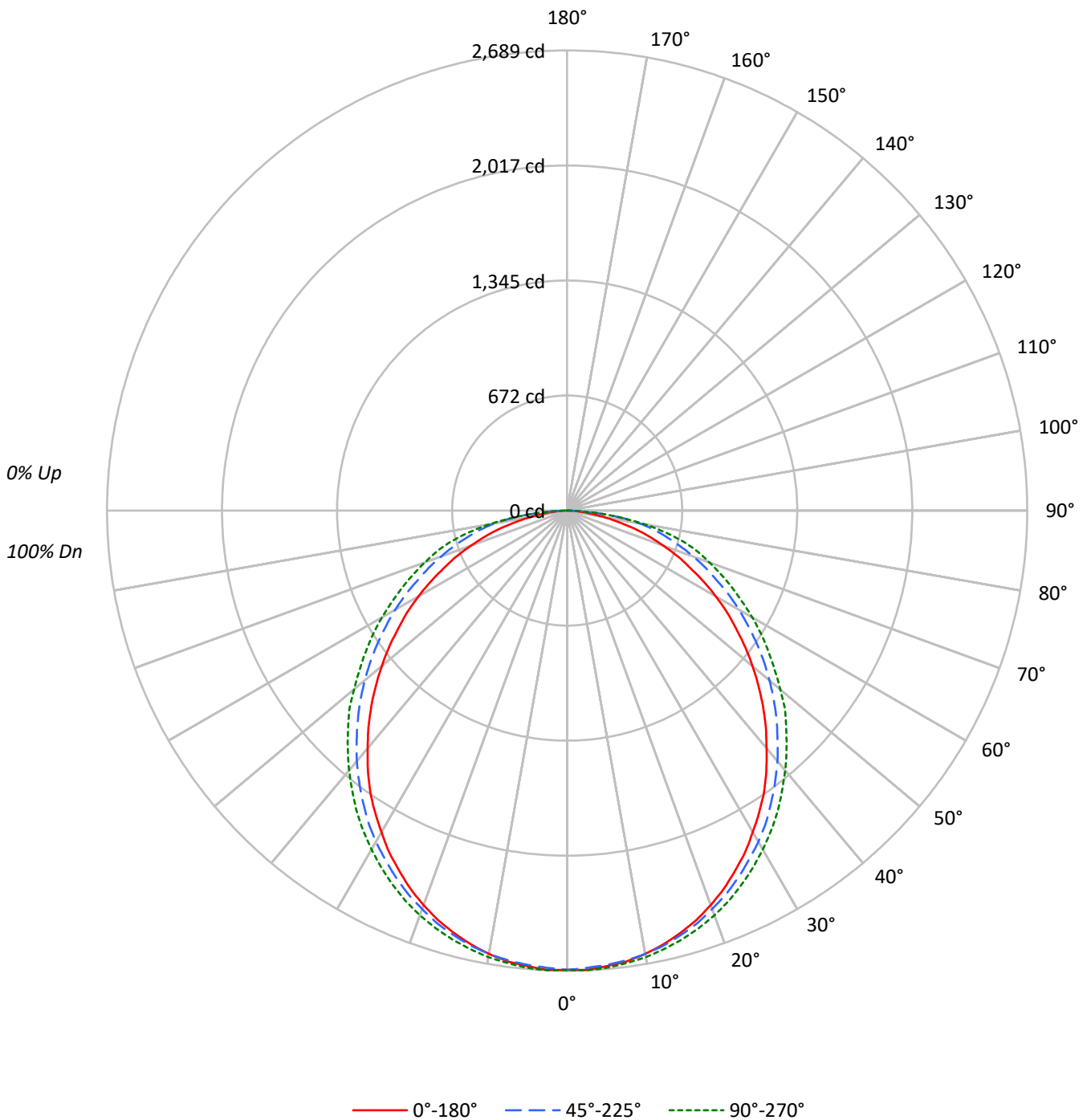
Input Watts (W): 57.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3611	3611	3611
5°	3609	3599	3622
10°	3594	3594	3621
15°	3560	3576	3614
20°	3513	3548	3603
25°	3448	3513	3581
30°	3371	3472	3552
35°	3296	3416	3524
40°	3184	3359	3482
45°	3080	3292	3445
50°	2961	3231	3403
55°	2829	3171	3370
60°	2697	3122	3363
65°	2526	3067	3384
70°	2339	3083	3475
75°	2094	3141	3671
80°	1692	3328	3591
85°	1274	2922	2847



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.1	3.3
10°-20°	726.0	9.5
20°-30°	1091.4	14.3
30°-40°	1300.0	17.0
40°-50°	1330.5	17.4
50°-60°	1197.9	15.7
60°-70°	940.7	12.3
70°-80°	610.5	8.0
80°-90°	188.8	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°	2071.5	27.1
0°-40°	3371.6	44.1
0°-60°	5899.9	77.2
0°-90°	7640.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7640.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2684	2684	2684	2684	2684	
5°	2672	2677	2665	2679	2682	254
15°	2555	2563	2568	2589	2594	721
25°	2322	2342	2366	2405	2412	1070
35°	2007	2031	2080	2131	2145	1252
45°	1619	1658	1730	1796	1810	1248
55°	1206	1260	1352	1422	1437	1081
65°	794	854	963	1044	1063	790
75°	403	480	604	687	706	426
85°	82	153	189	184	184	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2684.0	2684.0	2684.0	2684.0	2684.0
2.5°	2686.4	2686.4	2674.3	2686.4	2688.8
5°	2671.8	2676.7	2664.6	2679.1	2681.6
7.5°	2657.3	2657.3	2650.0	2664.6	2667.0
10°	2630.6	2633.0	2630.6	2647.6	2650.0
12.5°	2596.6	2601.5	2603.9	2620.9	2623.3
15°	2555.4	2562.6	2567.5	2589.3	2594.2
17.5°	2509.3	2516.5	2528.7	2552.9	2557.8
20°	2453.4	2463.1	2477.7	2509.3	2516.5
22.5°	2392.8	2402.5	2426.7	2455.9	2468.0
25°	2322.4	2341.8	2366.1	2404.9	2412.2
27.5°	2252.0	2269.0	2300.6	2341.8	2351.5
30°	2169.5	2196.2	2235.0	2276.3	2286.0
32.5°	2089.4	2116.1	2162.2	2205.9	2218.0
35°	2006.9	2031.2	2079.7	2130.7	2145.2
37.5°	1912.3	1943.8	1997.2	2048.2	2062.7
40°	1812.8	1851.6	1912.3	1965.7	1982.7
42.5°	1718.1	1759.4	1820.1	1878.3	1897.7
45°	1618.6	1657.5	1730.3	1795.8	1810.4
47.5°	1516.7	1560.4	1638.1	1703.6	1727.8
50°	1414.8	1460.9	1543.4	1611.4	1625.9
52.5°	1312.9	1361.4	1448.8	1521.6	1528.9
55°	1206.1	1259.5	1351.7	1422.1	1436.6
57.5°	1109.0	1155.1	1254.6	1327.4	1344.4
60°	1002.2	1053.2	1160.0	1227.9	1249.8
62.5°	900.3	953.7	1065.3	1133.3	1152.7
65°	793.5	854.2	963.4	1043.5	1062.9
67.5°	701.3	759.6	876.1	953.7	973.1
70°	594.6	660.1	783.8	863.9	883.3
72.5°	502.3	570.3	694.0	771.7	800.8
75°	402.8	480.5	604.3	686.8	706.2
77.5°	305.8	395.6	521.8	584.8	584.8
80°	218.4	313.1	429.5	458.7	463.5
82.5°	143.2	235.4	317.9	315.5	315.5
85°	82.5	152.9	189.3	184.4	184.4
87.5°	31.5	63.1	67.9	67.9	65.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)