

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: P685502

Luminaire Tested: **4CZL-12-UNV-W-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685502
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-W-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT WIDE LENS MODEL @80 CRI and 5000K
Light Source: (588) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

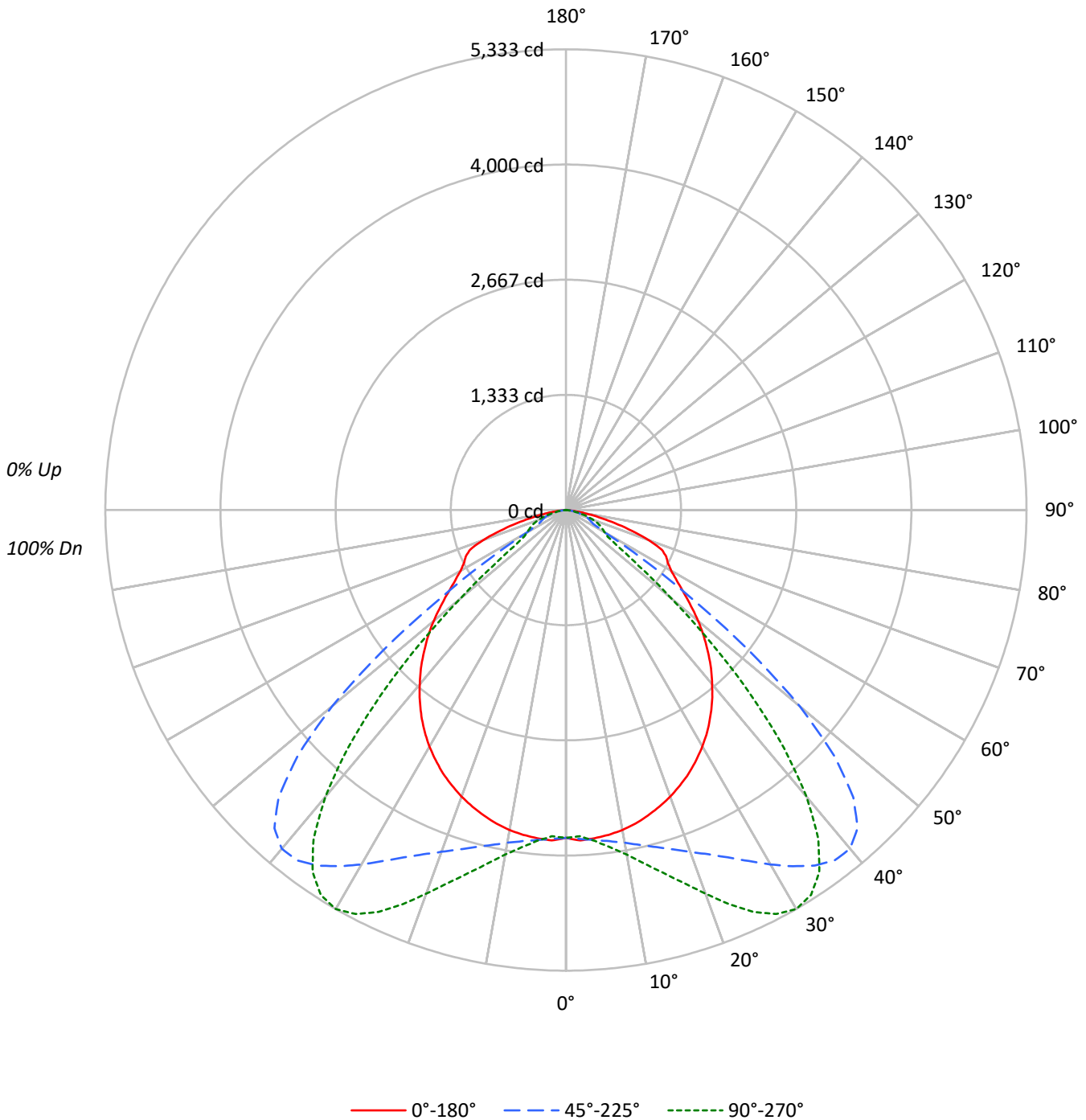
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12138.2 lumens
Efficiency: N/A
Efficacy: 157.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.69 / 1.65
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 77
Input Voltage (V): 120
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: P685502
CATALOG NUMBER: 4CZL-12-UNV-W-L850-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P685502

CATALOG NUMBER: 4CZL-12-UNV-W-L850-CD-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	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	89	89	89	87
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	77	77	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	67	67	67	65
4	86	75	67	61	84	73	66	60	71	65	59	69	63	59	67	62	58	58	58	58	56
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	51	51	51	51	49
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	45	45	45	43
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	39	39	39	38
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	35	35	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	32	32	32	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	29	29	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12256	12256	12256
5°	12362	12426	12465
10°	12332	12825	13275
15°	12242	13504	14532
20°	12135	14466	16235
25°	11990	15808	18286
30°	11785	17665	19884
35°	11497	19799	20158
40°	11098	21572	18263
45°	10619	21490	13861
50°	10043	17760	7989
55°	9361	9770	4109
60°	9085	3409	3349
65°	9791	2480	3357
70°	9668	2542	3239
75°	7310	2223	2601
80°	4417	1817	1841
85°	2201	930	393



TEST NUMBER: P685502
 CATALOG NUMBER: 4CZL-12-UNV-W-L850-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	367.3	3.0
10°-20°	1142.2	9.4
20°-30°	2006.4	16.5
30°-40°	2787.4	23.0
40°-50°	2826.8	23.3
50°-60°	1814.1	14.9
60°-70°	848.5	7.0
70°-80°	294.2	2.4
80°-90°	51.3	0.4
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°	3515.9	29.0
0°-40°	6303.3	51.9
0°-60°	10944.2	90.2
0°-90°	12138.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12138.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3795	3795	3795	3795	3795	
5°	3814	3787	3834	3846	3845	362
15°	3662	3749	4039	4256	4347	1033
25°	3365	3710	4437	4956	5132	1549
35°	2916	3741	5022	5195	5114	1821
45°	2325	4005	4706	3510	3035	1792
55°	1663	4136	1735	835	730	1501
65°	1281	1322	325	406	439	1247
75°	586	203	178	205	208	634
85°	59	53	25	14	11	90
90°	0	0	0	0	0	



TEST NUMBER: P685502

CATALOG NUMBER: 4CZL-12-UNV-W-L850-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3795.3	3795.3	3795.3	3795.3	3795.3	3795.3	3795.3	3795.3	3795.3	3795.3	3795.3
2.5°	3828.3	3816.4	3796.6	3788.7	3792.6	3812.4	3819.0	3804.5	3800.5	3790.0	3779.4
5°	3813.7	3803.2	3788.7	3786.0	3800.5	3833.5	3848.1	3844.1	3850.7	3852.0	3845.4
7.5°	3792.6	3783.4	3771.5	3783.4	3813.7	3866.5	3899.5	3910.1	3933.8	3939.1	3937.8
10°	3761.0	3753.0	3749.1	3779.4	3832.2	3911.4	3969.5	3998.5	4032.8	4044.7	4048.6
12.5°	3718.7	3710.8	3721.4	3774.2	3857.3	3970.8	4056.6	4108.0	4156.8	4181.9	4189.8
15°	3662.0	3659.3	3685.7	3770.2	3889.0	4039.4	4158.2	4238.7	4308.6	4336.3	4346.9
17.5°	3600.0	3601.3	3648.8	3768.9	3927.2	4119.9	4271.7	4386.5	4472.2	4511.8	4523.7
20°	3531.3	3535.3	3606.6	3767.6	3974.7	4209.6	4397.0	4547.5	4654.4	4707.1	4724.3
22.5°	3450.8	3458.8	3560.4	3768.9	4024.9	4312.6	4544.8	4724.3	4852.3	4915.6	4936.8
25°	3365.1	3376.9	3512.9	3775.5	4088.2	4436.6	4713.7	4923.6	5052.9	5108.3	5132.1
27.5°	3266.1	3285.9	3461.4	3784.7	4163.4	4580.5	4886.6	5088.5	5208.6	5250.8	5271.9
30°	3160.5	3183.0	3411.3	3803.2	4261.1	4737.5	5046.3	5216.5	5297.0	5320.8	5332.6
32.5°	3044.4	3081.3	3361.1	3833.5	4375.9	4889.2	5163.7	5265.3	5285.1	5277.2	5281.2
35°	2916.4	2956.0	3313.6	3883.7	4506.6	5022.5	5209.9	5209.9	5151.9	5116.2	5113.6
37.5°	2780.5	2830.6	3266.1	3941.7	4658.3	5110.9	5159.8	5029.1	4887.9	4811.4	4799.5
40°	2632.7	2700.0	3233.1	4020.9	4795.6	5117.5	4980.3	4711.1	4470.9	4346.9	4332.4
42.5°	2486.2	2569.3	3218.6	4123.9	4898.5	4996.1	4642.5	4226.8	3900.8	3754.4	3738.5
45°	2325.2	2434.7	3223.9	4265.1	4926.2	4705.8	4139.7	3601.3	3235.7	3051.0	3035.2
47.5°	2165.5	2301.4	3237.1	4424.7	4804.8	4213.6	3470.6	2847.8	2484.9	2290.9	2288.2
50°	1999.2	2176.1	3268.7	4555.4	4476.2	3535.3	2648.5	2040.2	1749.8	1602.0	1590.2
52.5°	1826.4	2066.5	3337.4	4579.1	3891.6	2664.3	1797.3	1361.9	1173.2	1079.5	1061.0
55°	1662.7	1974.2	3449.5	4365.4	3051.0	1735.3	1132.2	859.1	764.1	725.8	729.8
57.5°	1521.5	1905.6	3580.2	3807.1	1980.8	1021.4	655.9	571.4	568.8	572.7	574.0
60°	1406.7	1863.3	3638.2	2855.7	1087.4	527.9	457.9	476.4	501.5	516.0	518.6
62.5°	1331.5	1840.9	3461.4	1654.8	483.0	368.2	399.8	434.2	463.2	476.4	477.7
65°	1281.4	1781.5	2831.9	818.2	295.6	324.6	364.2	399.8	426.2	436.8	439.4
67.5°	1203.5	1613.9	1941.2	339.1	260.0	293.0	331.2	365.5	388.0	395.9	397.2
70°	1024.0	1351.3	1128.3	225.7	234.9	269.2	299.6	325.9	340.5	344.4	343.1
72.5°	799.7	1070.2	570.1	204.5	217.7	236.2	253.4	267.9	275.8	279.8	279.8
75°	585.9	782.5	267.9	180.8	162.3	178.2	195.3	204.5	207.2	208.5	208.5
77.5°	393.3	539.7	159.7	139.9	125.4	138.6	145.2	141.2	138.6	141.2	141.2
80°	237.5	332.5	139.9	101.6	96.3	97.7	92.4	92.4	97.7	100.3	99.0
82.5°	128.0	188.7	122.7	73.9	64.7	59.4	58.1	55.4	52.8	51.5	51.5
85°	59.4	96.3	79.2	44.9	34.3	25.1	19.8	14.5	13.2	10.6	10.6
87.5°	23.8	36.9	23.8	14.5	7.9	5.3	4.0	2.6	1.3	1.3	1.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)