

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: P685332

Luminaire Tested: **4CZL-12-UNV-L935-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685332
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-UNV-L935-CD-U
Description: METALUX CRUZE LINEAR 4FT BASE MODEL @90 CRI and 3500K
Light Source: (588) 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

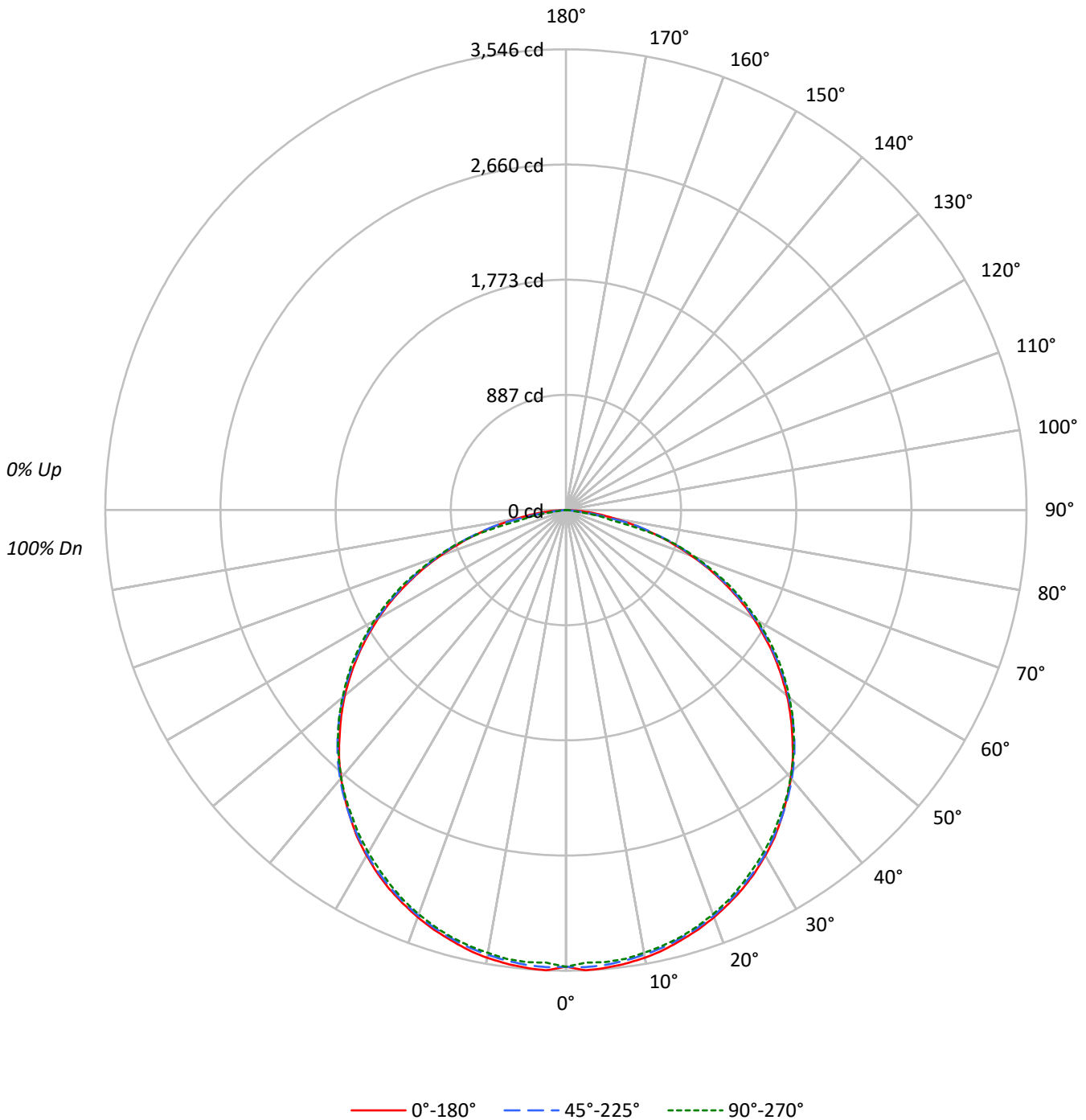
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10428.1 lumens
Efficiency: N/A
Efficacy: 135.4 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.29 / 1.41
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

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				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	100	100	100	100
1	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	84	84	84	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	70	70	70	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58	58	58	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50	50	50	50
5	76	63	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43	43	43	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37	37	37	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	33	33	33	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29	29	29	29
9	56	42	34	29	55	42	34	29	41	33	28	40	33	28	39	33	28	26	26	26	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	24	24	24	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11352	11352	11352
5°	11465	11392	11322
10°	11474	11397	11348
15°	11458	11412	11376
20°	11462	11421	11377
25°	11464	11418	11361
30°	11450	11418	11346
35°	11408	11408	11328
40°	11355	11400	11345
45°	11258	11357	11332
50°	11163	11244	11282
55°	11014	11093	11201
60°	10774	10871	11002
65°	10373	10520	10700
70°	9701	9894	9984
75°	8729	8890	8435
80°	7292	5938	4623
85°	5439	1430	515



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	333.5	3.2
10°-20°	961.5	9.2
20°-30°	1472.4	14.1
30°-40°	1802.8	17.3
40°-50°	1907.1	18.3
50°-60°	1758.7	16.9
60°-70°	1356.7	13.0
70°-80°	724.6	6.9
80°-90°	110.9	1.1
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°	2767.5	26.5
0°-40°	4570.2	43.8
0°-60°	8236.0	79.0
0°-90°	10428.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10428.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3515	3515	3515	3515	3515	
5°	3537	3495	3514	3499	3493	336
15°	3428	3391	3414	3402	3403	968
25°	3218	3184	3205	3181	3189	1483
35°	2894	2877	2894	2869	2874	1811
45°	2465	2464	2487	2470	2481	1903
55°	1956	1954	1970	1982	1990	1745
65°	1358	1358	1377	1388	1400	1340
75°	700	699	712	718	676	741
85°	147	105	39	16	14	180
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3515.3	3515.3	3515.3	3515.3	3515.3
2.5°	3546.4	3504.6	3521.8	3508.9	3487.5
5°	3536.8	3495.0	3514.3	3499.3	3492.8
7.5°	3521.8	3478.9	3498.2	3486.4	3484.3
10°	3499.3	3455.3	3475.7	3462.8	3460.7
12.5°	3469.3	3426.4	3448.9	3433.9	3436.1
15°	3427.5	3391.1	3413.6	3401.8	3402.8
17.5°	3385.7	3348.2	3371.8	3360.0	3361.1
20°	3335.3	3298.9	3323.6	3305.3	3310.7
22.5°	3278.6	3246.4	3267.8	3244.3	3255.0
25°	3217.5	3184.3	3204.6	3181.1	3188.6
27.5°	3147.8	3116.8	3137.1	3112.5	3115.7
30°	3070.7	3042.8	3062.1	3037.5	3042.8
32.5°	2988.2	2963.6	2978.6	2956.1	2963.6
35°	2893.9	2876.8	2893.9	2869.3	2873.6
37.5°	2795.3	2778.2	2801.8	2780.3	2787.8
40°	2693.6	2677.5	2704.3	2682.8	2691.4
42.5°	2585.3	2573.6	2600.3	2578.9	2589.6
45°	2465.3	2464.3	2486.8	2469.6	2481.4
47.5°	2346.4	2344.3	2366.8	2355.0	2368.9
50°	2222.1	2220.0	2238.2	2237.1	2245.7
52.5°	2089.3	2092.5	2109.6	2112.8	2122.5
55°	1956.4	1954.3	1970.3	1982.1	1989.6
57.5°	1811.8	1816.1	1828.9	1842.9	1848.2
60°	1668.2	1666.1	1683.2	1695.0	1703.6
62.5°	1516.1	1516.1	1530.0	1547.1	1555.7
65°	1357.5	1357.5	1376.8	1387.5	1400.4
67.5°	1195.7	1192.5	1209.6	1233.2	1231.1
70°	1027.5	1028.6	1047.9	1059.6	1057.5
72.5°	860.4	863.6	883.9	889.3	894.6
75°	699.6	698.6	712.5	717.9	676.1
77.5°	540.0	541.1	549.6	402.9	353.6
80°	392.1	394.3	319.3	248.6	248.6
82.5°	259.3	255.0	163.9	96.4	70.7
85°	146.8	105.0	38.6	16.1	13.9
87.5°	60.0	19.3	10.7	7.5	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)