

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: P685471

Luminaire Tested: **4CZL-9-UNV-M-L950-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685471
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-M-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT MEDIUM LENS MODEL @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

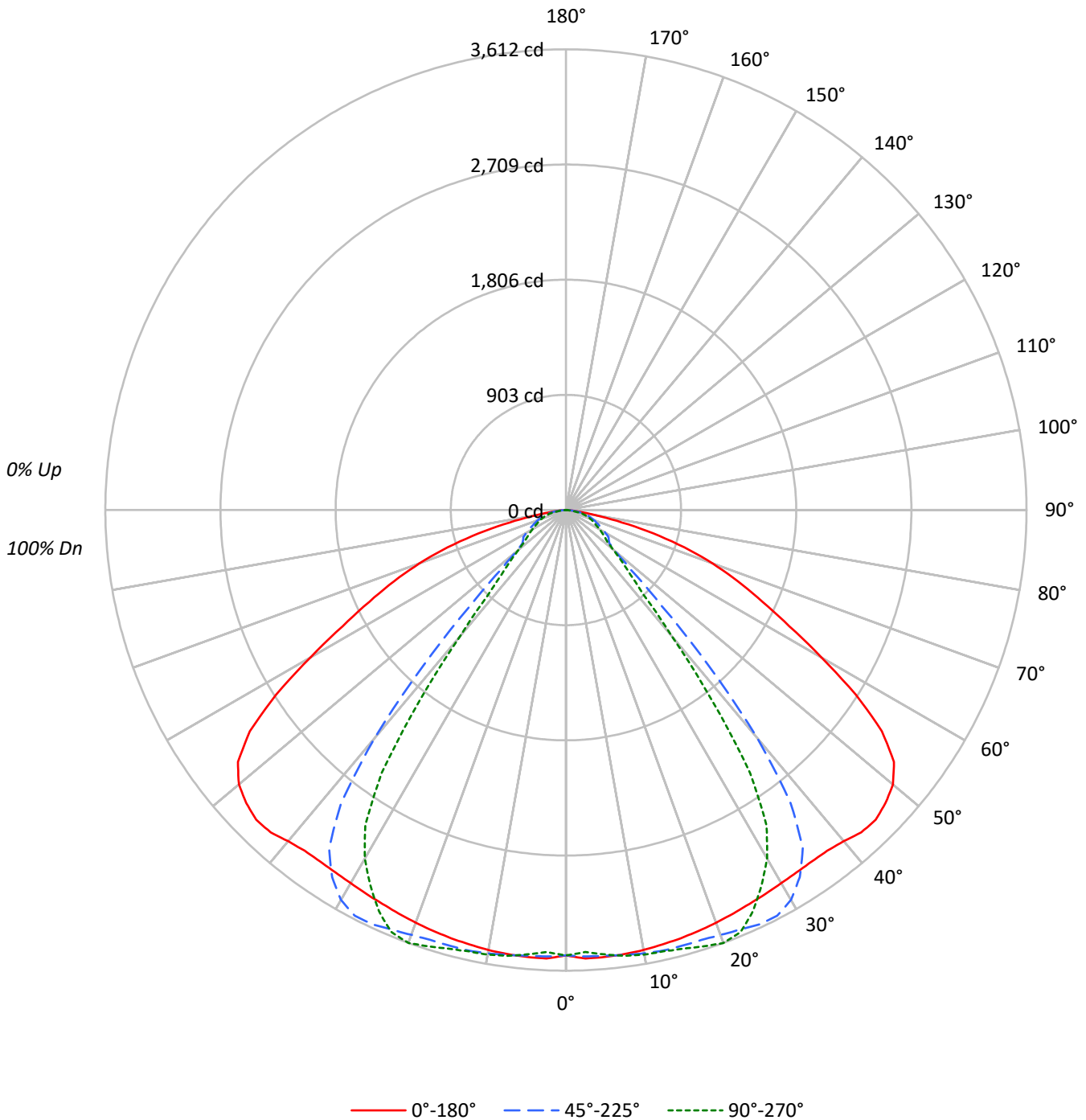
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7543.6 lumens
Efficiency: N/A
Efficacy: 139.7 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 1.28 / 1.22
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 54
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	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	90	88
2	103	96	90	86	100	94	89	85	91	87	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	79	73	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	51	61	55	50	59	54	50	50	50	50	48
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	37	36
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	34	34	34	33

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11275	11275	11275
5°	11401	11369	11337
10°	11484	11574	11606
15°	11621	11820	11902
20°	11834	12181	12411
25°	12138	12774	12364
30°	12594	13158	11762
35°	13256	12764	9933
40°	14287	9844	5432
45°	15685	4839	3247
50°	16819	2529	2421
55°	17033	2308	2090
60°	14938	2301	1970
65°	12999	2211	1907
70°	11536	2240	1920
75°	8850	2299	1949
80°	4504	2336	1614
85°	1775	1315	459



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	334.6	4.4
10°-20°	997.1	13.2
20°-30°	1609.3	21.3
30°-40°	1884.7	25.0
40°-50°	1283.0	17.0
50°-60°	742.9	9.8
60°-70°	424.7	5.6
70°-80°	218.6	2.9
80°-90°	48.7	0.6
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°	2941.0	39.0
0°-40°	4825.7	64.0
0°-60°	6851.6	90.8
0°-90°	7543.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7543.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3492	3492	3492	3492	3492	
5°	3517	3483	3507	3503	3498	335
15°	3476	3471	3536	3545	3560	984
25°	3407	3455	3585	3530	3470	1577
35°	3363	3529	3238	2731	2520	2117
45°	3435	2556	1060	714	711	2639
55°	3026	877	410	382	371	2636
65°	1701	313	289	255	250	1706
75°	709	193	184	161	156	754
85°	48	58	36	17	12	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3491.7	3491.7	3491.7	3491.7	3491.7	3491.7	3491.7	3491.7	3491.7	3491.7	3491.7
2.5°	3519.8	3509.9	3490.0	3481.8	3481.8	3503.3	3506.6	3493.3	3490.9	3479.3	3468.5
5°	3517.3	3507.4	3488.4	3480.9	3483.4	3507.4	3513.2	3502.4	3505.7	3502.4	3497.5
7.5°	3512.4	3501.6	3484.3	3479.3	3486.7	3517.3	3527.2	3521.5	3528.9	3527.2	3525.6
10°	3502.4	3494.2	3477.6	3476.8	3491.7	3529.7	3542.1	3534.7	3537.2	3536.3	3539.6
12.5°	3489.2	3481.8	3467.7	3475.2	3496.7	3537.2	3545.4	3533.9	3537.2	3538.0	3543.8
15°	3476.0	3466.9	3457.8	3475.2	3497.5	3535.5	3543.8	3542.1	3552.0	3552.9	3560.3
17.5°	3459.5	3453.7	3451.2	3474.3	3491.7	3533.9	3552.9	3562.8	3576.0	3579.3	3586.8
20°	3443.7	3438.8	3444.6	3470.2	3489.2	3544.6	3571.0	3585.9	3600.0	3604.1	3611.6
22.5°	3424.7	3421.4	3437.1	3464.4	3493.3	3561.1	3590.9	3592.5	3586.8	3576.0	3581.0
25°	3406.6	3406.6	3429.7	3462.8	3505.7	3585.1	3587.6	3540.5	3498.3	3470.2	3470.2
27.5°	3391.7	3395.0	3423.9	3470.2	3529.7	3586.8	3518.1	3424.7	3362.7	3322.2	3319.8
30°	3377.6	3383.4	3423.9	3490.9	3547.1	3528.9	3395.8	3282.6	3196.6	3157.7	3154.4
32.5°	3367.7	3376.8	3438.8	3522.3	3526.4	3412.3	3238.7	3095.7	2994.1	2936.2	2926.3
35°	3362.7	3373.5	3466.9	3549.6	3442.9	3237.9	2991.6	2770.9	2609.7	2535.3	2519.6
37.5°	3366.0	3385.1	3505.7	3526.4	3233.8	2894.9	2541.1	2224.5	2002.9	1932.7	1883.9
40°	3389.2	3421.4	3536.3	3337.9	2794.8	2335.2	1866.5	1526.0	1373.0	1322.6	1288.7
42.5°	3428.0	3460.3	3456.1	2906.4	2183.1	1659.1	1202.7	998.6	924.2	915.9	900.2
45°	3434.7	3447.1	3196.6	2341.8	1588.0	1059.7	774.6	714.2	712.6	718.3	710.9
47.5°	3399.9	3376.0	2822.1	1791.3	1093.6	685.3	582.8	592.7	597.7	593.5	587.7
50°	3347.9	3259.4	2402.2	1316.8	729.1	503.4	508.4	517.5	500.1	488.5	481.9
52.5°	3242.1	3070.1	1936.0	933.3	504.2	429.8	469.5	443.1	418.3	411.7	410.8
55°	3025.5	2789.1	1489.6	672.9	385.2	410.0	417.4	383.6	376.1	372.8	371.2
57.5°	2695.6	2439.4	1120.1	486.1	338.1	396.0	362.9	349.7	342.2	339.7	337.3
60°	2312.9	2048.4	834.9	357.1	328.2	356.3	329.0	316.6	308.3	305.0	305.0
62.5°	1974.0	1695.4	617.5	290.1	325.7	321.6	296.8	283.5	278.6	276.9	275.3
65°	1701.2	1363.9	445.6	268.7	304.2	289.3	265.3	256.3	252.9	249.6	249.6
67.5°	1458.2	1068.0	328.2	263.7	279.4	260.4	242.2	234.8	230.6	229.8	229.0
70°	1221.8	787.0	249.6	257.9	265.3	237.2	219.9	210.8	205.8	203.4	203.4
72.5°	972.9	539.8	199.2	237.2	243.0	210.0	192.6	186.0	181.9	179.4	178.6
75°	709.3	338.9	175.2	199.2	209.1	184.3	167.0	161.2	159.5	157.1	156.2
77.5°	451.3	202.5	149.6	162.8	171.1	155.4	142.2	134.7	133.9	131.4	130.6
80°	242.2	129.8	119.9	128.1	133.1	125.6	109.9	95.1	90.9	87.6	86.8
82.5°	112.4	82.7	89.3	96.7	99.2	80.2	66.1	59.5	55.4	51.3	48.8
85°	47.9	44.6	55.4	59.5	48.8	35.5	23.1	17.4	14.1	13.2	12.4
87.5°	17.4	17.4	20.7	14.1	8.3	6.6	6.6	5.8	5.0	4.1	4.1
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)