

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: P685323

Luminaire Tested: **4CZL-16-UNV-L850-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685323
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT BASE MODEL @80 CRI and 5000K
Light Source: (588) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

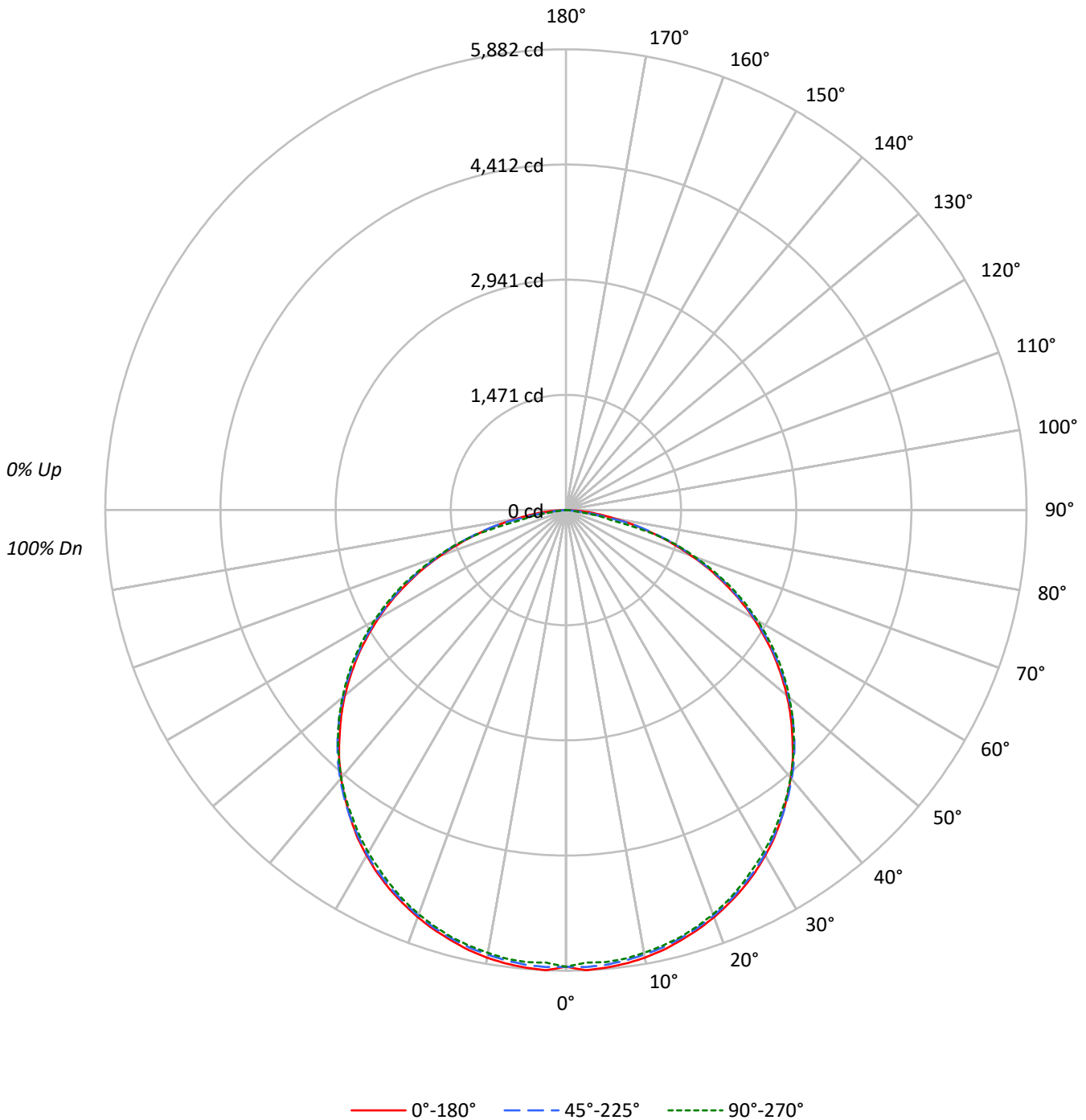
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17295.2 lumens
Efficiency: N/A
Efficacy: 167.9 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): 103
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				
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	109	104	100	96	106	102	98	95	98	94	92	94	91	89	90	88	86	86	86	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	72	72	72	70
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	61	61	61	58
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	52	52	52	50
5	76	63	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	45	45	45	43
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	39	39	39	37
7	65	51	42	36	63	50	42	36	48	41	35	47	40	35	46	40	35	35	35	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	31	31	31	29
9	56	42	34	29	55	42	34	29	41	33	28	40	33	28	39	33	28	28	28	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	25	25	25	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18827	18827	18827
5°	19014	18893	18778
10°	19030	18902	18820
15°	19004	18927	18867
20°	19009	18942	18869
25°	19013	18937	18842
30°	18990	18937	18817
35°	18921	18921	18788
40°	18831	18907	18817
45°	18673	18835	18795
50°	18515	18649	18711
55°	18268	18398	18578
60°	17869	18029	18247
65°	17203	17447	17746
70°	16089	16408	16559
75°	14478	14744	13990
80°	12095	9847	7667
85°	9018	2371	856



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	553.1	3.2
10°-20°	1594.7	9.2
20°-30°	2442.1	14.1
30°-40°	2989.9	17.3
40°-50°	3163.0	18.3
50°-60°	2916.8	16.9
60°-70°	2250.0	13.0
70°-80°	1201.7	6.9
80°-90°	183.9	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°	4589.9	26.5
0°-40°	7579.8	43.8
0°-60°	13659.6	79.0
0°-90°	17295.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17295.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5830	5830	5830	5830	5830	
5°	5866	5796	5828	5804	5793	558
15°	5685	5624	5662	5642	5644	1606
25°	5336	5281	5315	5276	5288	2460
35°	4800	4771	4800	4759	4766	3003
45°	4089	4087	4124	4096	4116	3156
55°	3245	3241	3268	3287	3300	2895
65°	2251	2251	2283	2301	2322	2223
75°	1160	1159	1182	1191	1121	1228
85°	243	174	64	27	23	299
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5830.3	5830.3	5830.3	5830.3	5830.3
2.5°	5881.8	5812.5	5840.9	5819.6	5784.1
5°	5865.8	5796.5	5828.5	5803.6	5793.0
7.5°	5840.9	5769.9	5801.8	5782.3	5778.7
10°	5803.6	5730.8	5764.5	5743.2	5739.6
12.5°	5753.9	5682.8	5720.1	5695.2	5698.8
15°	5684.6	5624.1	5661.5	5641.9	5643.7
17.5°	5615.3	5553.1	5592.2	5572.6	5574.4
20°	5531.7	5471.3	5512.2	5482.0	5490.9
22.5°	5437.6	5384.2	5419.8	5380.7	5398.5
25°	5336.3	5281.2	5314.9	5275.9	5288.3
27.5°	5220.8	5169.2	5203.0	5162.1	5167.5
30°	5092.8	5046.6	5078.6	5037.7	5046.6
32.5°	4956.0	4915.1	4940.0	4902.7	4915.1
35°	4799.6	4771.2	4799.6	4758.7	4765.9
37.5°	4636.1	4607.7	4646.8	4611.3	4623.7
40°	4467.3	4440.7	4485.1	4449.6	4463.8
42.5°	4287.9	4268.3	4312.7	4277.2	4295.0
45°	4088.8	4087.1	4124.4	4095.9	4115.5
47.5°	3891.6	3888.0	3925.3	3905.8	3928.9
50°	3685.5	3681.9	3712.1	3710.3	3724.5
52.5°	3465.1	3470.4	3498.9	3504.2	3520.2
55°	3244.8	3241.2	3267.9	3287.4	3299.9
57.5°	3004.9	3012.0	3033.3	3056.4	3065.3
60°	2766.8	2763.2	2791.6	2811.2	2825.4
62.5°	2514.4	2514.4	2537.5	2566.0	2580.2
65°	2251.4	2251.4	2283.4	2301.2	2322.5
67.5°	1983.1	1977.8	2006.2	2045.3	2041.7
70°	1704.1	1705.9	1737.9	1757.4	1753.9
72.5°	1426.9	1432.2	1466.0	1474.9	1483.8
75°	1160.4	1158.6	1181.7	1190.6	1121.3
77.5°	895.6	897.4	911.6	668.1	586.4
80°	650.4	653.9	529.5	412.3	412.3
82.5°	430.0	422.9	271.9	159.9	117.3
85°	243.4	174.1	64.0	26.7	23.1
87.5°	99.5	32.0	17.8	12.4	10.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)