

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: P685313

Luminaire Tested: **4CZL-16-UNV-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685313
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT BASE MODEL @80 CRI and 4000K
Light Source: (588) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

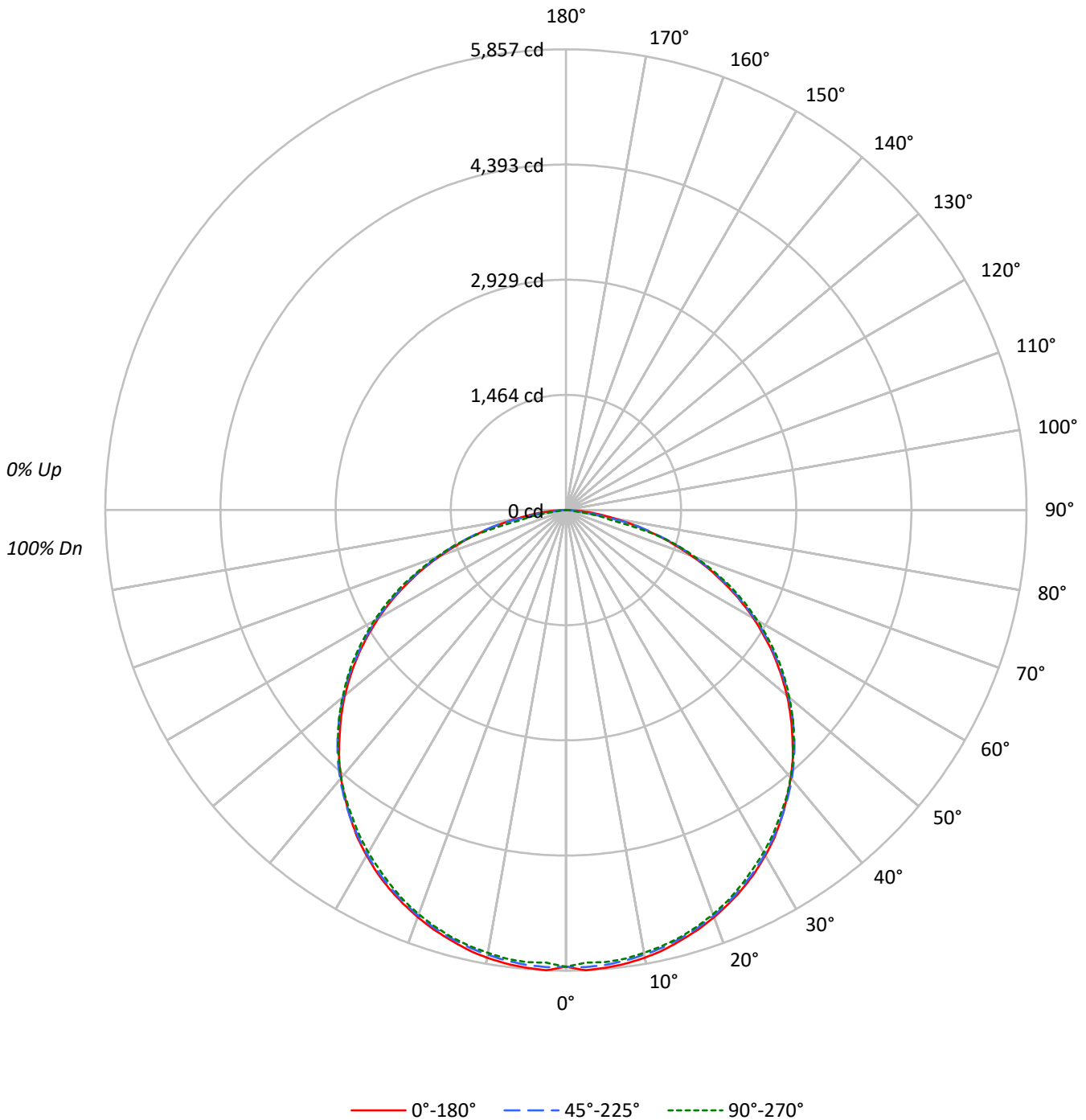
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17222.8 lumens
Efficiency: N/A
Efficacy: 167.2 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 (A_{in}): 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	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°	18748	18748	18748
5°	18935	18814	18699
10°	18950	18823	18741
15°	18925	18848	18789
20°	18930	18863	18790
25°	18934	18858	18764
30°	18910	18858	18739
35°	18841	18841	18709
40°	18753	18827	18738
45°	18594	18756	18716
50°	18437	18571	18633
55°	18191	18321	18500
60°	17794	17954	18171
65°	17131	17375	17672
70°	16022	16339	16490
75°	14417	14681	13931
80°	12045	9806	7634
85°	8981	2360	852



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	550.8	3.2
10°-20°	1588.1	9.2
20°-30°	2431.9	14.1
30°-40°	2977.4	17.3
40°-50°	3149.8	18.3
50°-60°	2904.6	16.9
60°-70°	2240.6	13.0
70°-80°	1196.7	6.9
80°-90°	183.1	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°	4570.7	26.5
0°-40°	7548.1	43.8
0°-60°	13602.5	79.0
0°-90°	17222.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17222.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5806	5806	5806	5806	5806	
5°	5841	5772	5804	5779	5769	555
15°	5661	5601	5638	5618	5620	1600
25°	5314	5259	5293	5254	5266	2449
35°	4780	4751	4780	4739	4746	2991
45°	4072	4070	4107	4079	4098	3143
55°	3231	3228	3254	3274	3286	2883
65°	2242	2242	2274	2292	2313	2214
75°	1156	1154	1177	1186	1117	1223
85°	242	173	64	26	23	297
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5805.9	5805.9	5805.9	5805.9	5805.9
2.5°	5857.2	5788.2	5816.5	5795.3	5759.9
5°	5841.3	5772.3	5804.1	5779.3	5768.7
7.5°	5816.5	5745.7	5777.6	5758.1	5754.6
10°	5779.3	5706.8	5740.4	5719.2	5715.6
12.5°	5729.8	5659.0	5696.2	5671.4	5674.9
15°	5660.8	5600.6	5637.8	5618.3	5620.1
17.5°	5591.8	5529.8	5568.8	5549.3	5551.1
20°	5508.6	5448.4	5489.1	5459.1	5467.9
22.5°	5414.8	5361.7	5397.1	5358.2	5375.9
25°	5313.9	5259.1	5292.7	5253.8	5266.2
27.5°	5198.9	5147.6	5181.2	5140.5	5145.8
30°	5071.5	5025.5	5057.4	5016.7	5025.5
32.5°	4935.3	4894.6	4919.3	4882.2	4894.6
35°	4779.5	4751.2	4779.5	4738.8	4745.9
37.5°	4616.7	4588.4	4627.4	4592.0	4604.4
40°	4448.6	4422.1	4466.3	4430.9	4445.1
42.5°	4269.9	4250.5	4294.7	4259.3	4277.0
45°	4071.7	4070.0	4107.1	4078.8	4098.3
47.5°	3875.3	3871.8	3908.9	3889.5	3912.5
50°	3670.0	3666.5	3696.6	3694.8	3709.0
52.5°	3450.6	3455.9	3484.2	3489.5	3505.5
55°	3231.2	3227.7	3254.2	3273.7	3286.0
57.5°	2992.3	2999.4	3020.6	3043.6	3052.5
60°	2755.2	2751.6	2780.0	2799.4	2813.6
62.5°	2503.9	2503.9	2526.9	2555.2	2569.4
65°	2242.0	2242.0	2273.9	2291.6	2312.8
67.5°	1974.8	1969.5	1997.8	2036.7	2033.2
70°	1697.0	1698.8	1730.6	1750.1	1746.5
72.5°	1420.9	1426.3	1459.9	1468.7	1477.6
75°	1155.5	1153.7	1176.7	1185.6	1116.6
77.5°	891.9	893.6	907.8	665.3	584.0
80°	647.7	651.2	527.3	410.5	410.5
82.5°	428.2	421.2	270.7	159.3	116.8
85°	242.4	173.4	63.7	26.5	23.0
87.5°	99.1	31.9	17.7	12.4	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)