

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: P685312

Luminaire Tested: **4CZL-12-UNV-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685312
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-12-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

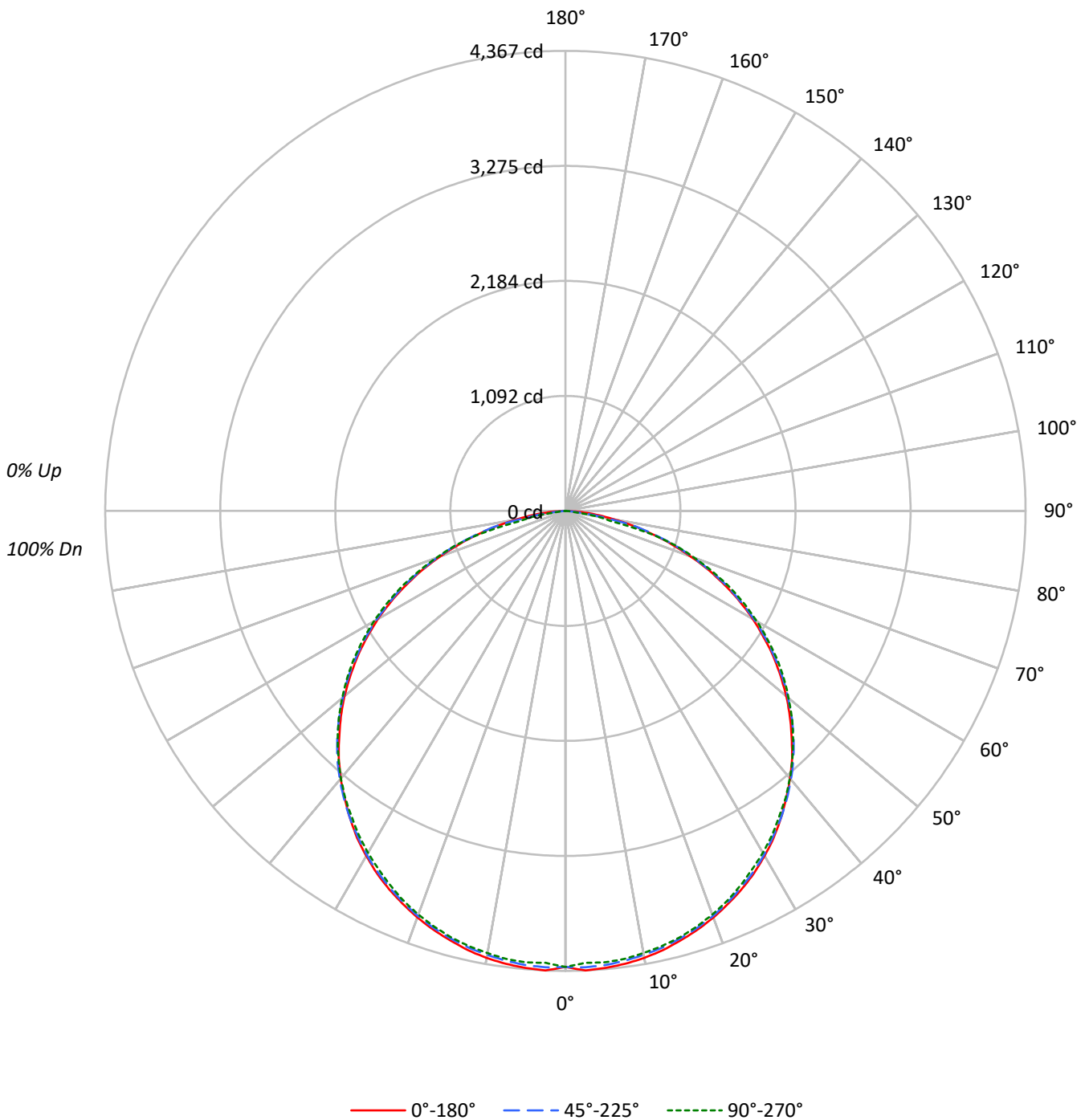
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12840.9 lumens
Efficiency: N/A
Efficacy: 166.8 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				
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°	13978	13978	13978
5°	14117	14027	13942
10°	14129	14034	13973
15°	14110	14052	14008
20°	14114	14064	14009
25°	14116	14060	13989
30°	14099	14060	13971
35°	14048	14048	13949
40°	13982	14037	13970
45°	13864	13984	13954
50°	13746	13846	13892
55°	13563	13659	13793
60°	13267	13386	13548
65°	12773	12954	13176
70°	11945	12182	12295
75°	10749	10947	10387
80°	8980	7312	5692
85°	6695	1760	637



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	410.6	3.2
10°-20°	1184.0	9.2
20°-30°	1813.1	14.1
30°-40°	2219.9	17.3
40°-50°	2348.4	18.3
50°-60°	2165.6	16.9
60°-70°	1670.5	13.0
70°-80°	892.2	6.9
80°-90°	136.5	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°	3407.8	26.5
0°-40°	5627.6	43.8
0°-60°	10141.6	79.0
0°-90°	12840.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12840.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4329	4329	4329	4329	4329	
5°	4355	4304	4327	4309	4301	414
15°	4220	4176	4203	4189	4190	1193
25°	3962	3921	3946	3917	3926	1826
35°	3564	3542	3564	3533	3538	2230
45°	3036	3034	3062	3041	3056	2343
55°	2409	2406	2426	2441	2450	2149
65°	1672	1672	1695	1708	1724	1650
75°	862	860	877	884	832	912
85°	181	129	48	20	17	222
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4328.7	4328.7	4328.7	4328.7	4328.7
2.5°	4367.0	4315.5	4336.6	4320.8	4294.4
5°	4355.1	4303.6	4327.4	4308.9	4301.0
7.5°	4336.6	4283.9	4307.6	4293.1	4290.4
10°	4308.9	4254.8	4279.9	4264.1	4261.4
12.5°	4272.0	4219.2	4246.9	4228.4	4231.1
15°	4220.5	4175.7	4203.4	4188.9	4190.2
17.5°	4169.1	4122.9	4151.9	4137.4	4138.7
20°	4107.1	4062.2	4092.5	4070.1	4076.7
22.5°	4037.1	3997.6	4023.9	3994.9	4008.1
25°	3961.9	3921.0	3946.1	3917.1	3926.3
27.5°	3876.2	3837.9	3863.0	3832.6	3836.6
30°	3781.2	3746.9	3770.6	3740.3	3746.9
32.5°	3679.6	3649.3	3667.7	3640.0	3649.3
35°	3563.5	3542.4	3563.5	3533.2	3538.4
37.5°	3442.1	3421.0	3450.0	3423.7	3432.9
40°	3316.8	3297.0	3330.0	3303.6	3314.1
42.5°	3183.5	3169.0	3202.0	3175.6	3188.8
45°	3035.8	3034.4	3062.2	3041.0	3055.6
47.5°	2889.3	2886.7	2914.4	2899.9	2917.0
50°	2736.3	2733.6	2756.1	2754.8	2765.3
52.5°	2572.7	2576.6	2597.8	2601.7	2613.6
55°	2409.1	2406.5	2426.2	2440.8	2450.0
57.5°	2231.0	2236.3	2252.1	2269.2	2275.8
60°	2054.2	2051.6	2072.7	2087.2	2097.7
62.5°	1866.8	1866.8	1884.0	1905.1	1915.7
65°	1671.6	1671.6	1695.3	1708.5	1724.4
67.5°	1472.4	1468.4	1489.5	1518.5	1515.9
70°	1265.2	1266.6	1290.3	1304.8	1302.2
72.5°	1059.4	1063.4	1088.4	1095.0	1101.6
75°	861.5	860.2	877.4	883.9	832.5
77.5°	664.9	666.3	676.8	496.1	435.4
80°	482.9	485.5	393.2	306.1	306.1
82.5°	319.3	314.0	201.9	118.7	87.1
85°	180.7	129.3	47.5	19.8	17.2
87.5°	73.9	23.7	13.2	9.2	7.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)