

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: P685553

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

Issue Date: 05/10/2023



**Test Information**

Test Method: LM-79-08  
Report Number: P685553  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 05/10/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4CZL-16-UNV-FL-L840-CD-U  
Description: METALUX CRUZE LINEAR 4FT FROSTED LENS MODEL @80 CRI and 4000K  
Light Source: (588) 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

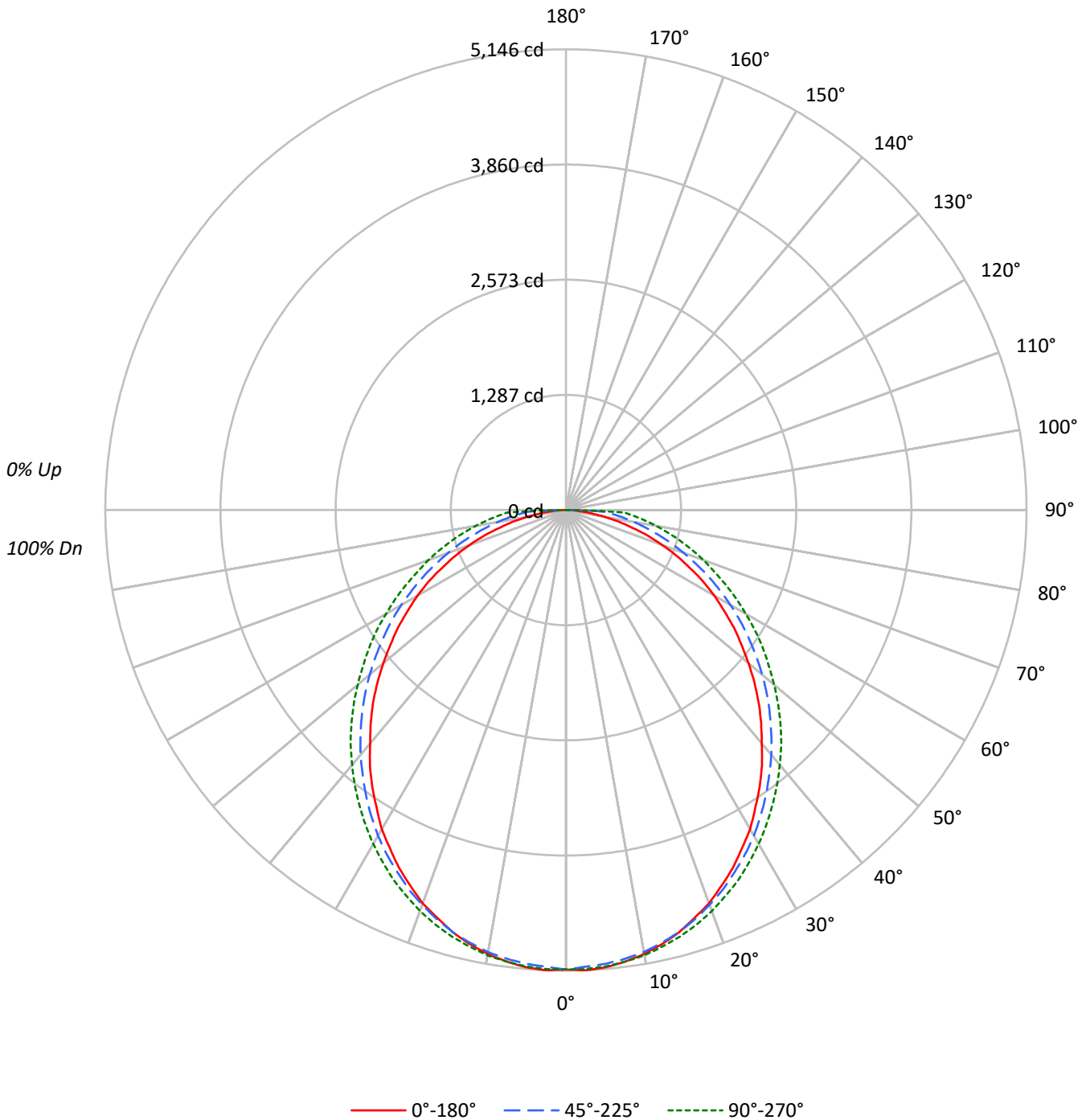
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14453.6 lumens  
Efficiency: N/A  
Efficacy: 140.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.34  
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 4' x H: 0.08')  
CIE Type: Direct

Input Watts (W): 103  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82	82	82	82
2	98	89	82	76	95	87	81	75	84	78	74	81	76	72	78	74	70	68	68	68	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57	57	57	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49	49	49	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42	42	42	42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37	37	37	37
7	64	51	42	36	63	50	41	36	48	41	35	47	40	35	46	39	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	43	34	29	55	42	34	29	41	34	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	26	24	24	24	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	16570	16570	16570
5°	16587	16369	16442
10°	16448	16194	16276
15°	16235	15951	16056
20°	15947	15642	15805
25°	15567	15283	15519
30°	15161	14924	15183
35°	14662	14486	14822
40°	14102	14045	14456
45°	13626	13554	14075
50°	13053	13047	13629
55°	12521	12494	13228
60°	11935	11940	12768
65°	11157	11344	12365
70°	10252	10680	12122
75°	8920	10103	11981
80°	7203	9688	12141
85°	4611	9762	13154



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	485.4	3.4
10°-20°	1381.1	9.6
20°-30°	2062.8	14.3
30°-40°	2439.6	16.9
40°-50°	2485.8	17.2
50°-60°	2227.5	15.4
60°-70°	1734.9	12.0
70°-80°	1123.2	7.8
80°-90°	513.3	3.6
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°	3929.3	27.2
0°-40°	6368.9	44.1
0°-60°	11082.2	76.7
0°-90°	14453.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14453.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5131	5131	5131	5131	5131	
5°	5126	5118	5087	5118	5117	486
15°	4884	4884	4881	4926	4931	1375
25°	4412	4427	4460	4539	4559	2030
35°	3774	3810	3894	4000	4023	2358
45°	3046	3101	3222	3344	3390	2347
55°	2290	2354	2490	2633	2685	2044
65°	1525	1592	1757	1904	1965	1515
75°	770	869	1068	1246	1319	827
85°	154	298	521	709	761	198
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5131.3	5131.3	5131.3	5131.3	5131.3
2.5°	5145.9	5137.1	5105.9	5133.2	5132.2
5°	5126.4	5117.6	5087.4	5117.6	5116.6
7.5°	5086.4	5083.5	5056.2	5089.3	5086.4
10°	5034.7	5030.8	5013.2	5046.4	5051.3
12.5°	4966.4	4964.5	4950.8	4989.8	4992.8
15°	4883.5	4883.5	4880.6	4926.4	4931.3
17.5°	4777.2	4790.9	4793.8	4843.5	4854.3
20°	4675.8	4679.7	4693.3	4753.8	4766.5
22.5°	4542.2	4558.7	4586.0	4652.4	4663.1
25°	4411.5	4427.1	4460.2	4539.2	4558.7
27.5°	4259.3	4289.5	4335.4	4414.4	4433.9
30°	4115.0	4140.3	4199.8	4287.6	4307.1
32.5°	3938.4	3981.3	4049.6	4142.3	4168.6
35°	3773.6	3809.7	3894.5	3999.9	4023.3
37.5°	3597.0	3640.0	3729.7	3841.9	3874.0
40°	3403.9	3466.4	3570.7	3682.9	3717.0
42.5°	3227.4	3284.9	3395.2	3521.9	3561.0
45°	3046.0	3100.6	3221.5	3344.4	3390.3
47.5°	2856.8	2913.3	3045.0	3175.7	3216.7
50°	2662.7	2730.0	2861.6	2999.2	3036.2
52.5°	2469.6	2536.9	2676.3	2813.9	2855.8
55°	2290.1	2354.5	2490.0	2633.4	2685.1
57.5°	2095.0	2163.3	2312.5	2451.0	2506.6
60°	1914.6	1964.3	2122.3	2265.7	2319.4
62.5°	1728.3	1781.9	1936.0	2083.3	2146.7
65°	1525.4	1591.8	1756.6	1903.9	1965.3
67.5°	1340.1	1403.5	1573.2	1739.0	1788.8
70°	1148.0	1221.1	1396.7	1566.4	1636.6
72.5°	964.6	1040.7	1233.8	1402.5	1473.7
75°	770.5	869.0	1068.0	1245.5	1318.7
77.5°	610.6	708.1	911.9	1097.3	1167.5
80°	433.1	553.0	773.4	960.7	1023.1
82.5°	288.7	410.6	641.8	824.2	891.5
85°	154.1	297.5	520.8	709.1	760.8
87.5°	67.3	207.7	422.3	590.1	651.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)