

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: P685483

Luminaire Tested: **4CZL-16-UNV-W-L835-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685483
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-W-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT WIDE LENS MODEL @80 CRI and 3500K
Light Source: (588) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

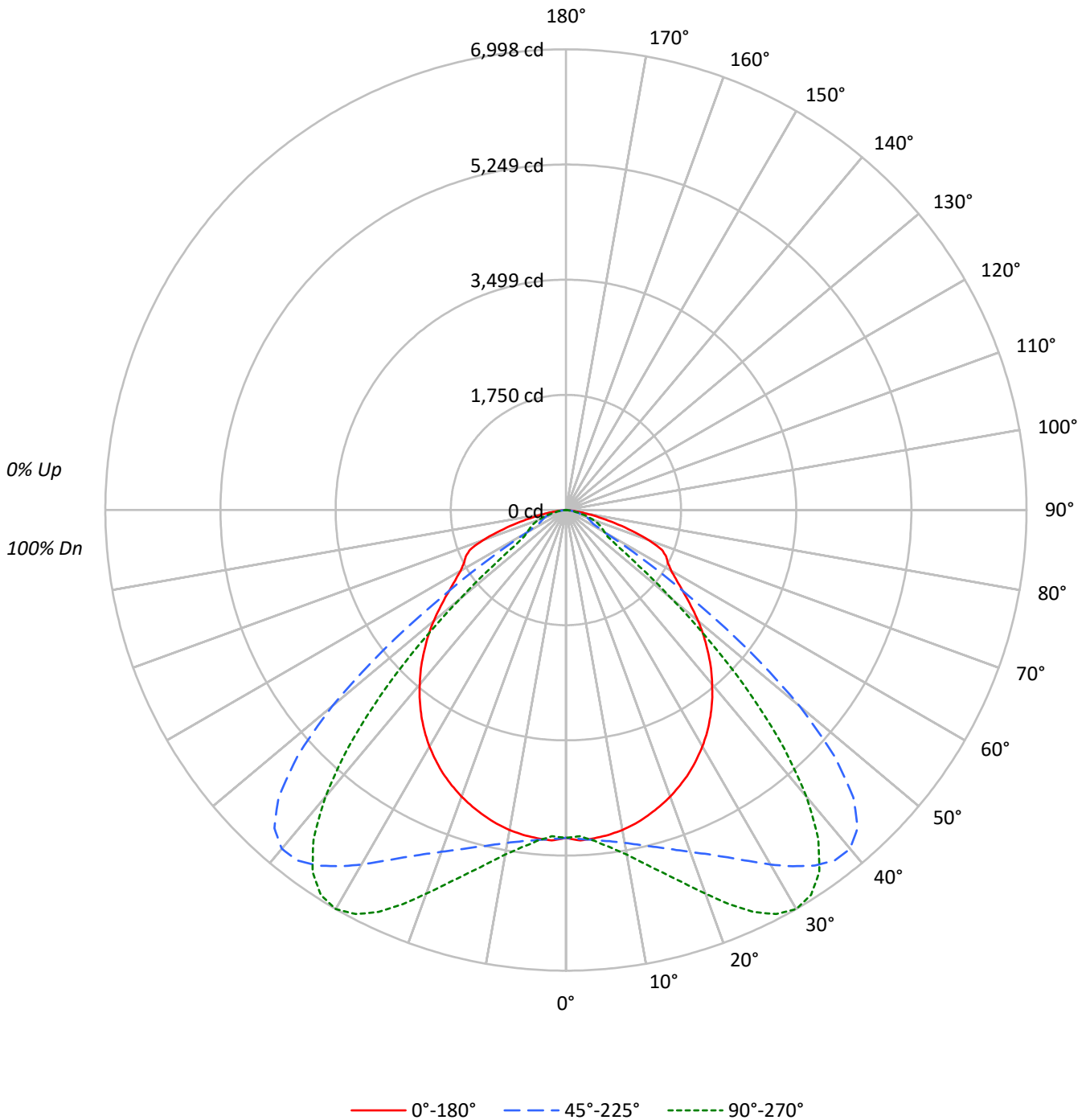
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15928.5 lumens
Efficiency: N/A
Efficacy: 154.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.69 / 1.65
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	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	89	89	89	87
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	77	77	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	67	67	67	65
4	86	75	67	61	84	73	66	60	71	65	59	69	63	59	67	62	58	58	58	58	56
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	51	51	51	51	49
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	45	45	45	43
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	39	39	39	38
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	35	35	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	32	32	32	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	29	29	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16083	16083	16083
5°	16223	16307	16357
10°	16183	16830	17421
15°	16065	17721	19070
20°	15925	18984	21304
25°	15734	20744	23995
30°	15465	23181	26093
35°	15087	25982	26453
40°	14563	28309	23965
45°	13935	28201	18189
50°	13180	23307	10483
55°	12284	12820	5391
60°	11922	4474	4396
65°	12848	3255	4407
70°	12688	3336	4251
75°	9593	2917	3414
80°	5796	2382	2416
85°	2886	1219	515



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	482.0	3.0
10°-20°	1498.8	9.4
20°-30°	2633.0	16.5
30°-40°	3657.8	23.0
40°-50°	3709.5	23.3
50°-60°	2380.5	14.9
60°-70°	1113.4	7.0
70°-80°	386.1	2.4
80°-90°	67.3	0.4
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°	4613.8	29.0
0°-40°	8271.7	51.9
0°-60°	14361.7	90.2
0°-90°	15928.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15928.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4980	4980	4980	4980	4980	
5°	5005	4969	5031	5047	5046	475
15°	4806	4920	5301	5585	5704	1356
25°	4416	4868	5822	6503	6735	2032
35°	3827	4909	6591	6818	6710	2390
45°	3051	5255	6175	4606	3983	2352
55°	2182	5428	2277	1096	958	1969
65°	1682	1734	426	533	577	1636
75°	769	266	234	269	274	832
85°	78	70	33	19	14	118
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°	4980.4	4980.4	4980.4	4980.4	4980.4	4980.4	4980.4	4980.4	4980.4	4980.4	4980.4
2.5°	5023.7	5008.1	4982.1	4971.7	4976.9	5002.9	5011.6	4992.5	4987.3	4973.5	4959.6
5°	5004.7	4990.8	4971.7	4968.3	4987.3	5030.6	5049.7	5044.5	5053.1	5054.9	5046.2
7.5°	4976.9	4964.8	4949.2	4964.8	5004.7	5073.9	5117.2	5131.1	5162.2	5169.2	5167.4
10°	4935.4	4925.0	4919.8	4959.6	5028.9	5132.8	5209.0	5247.1	5292.1	5307.7	5312.9
12.5°	4880.0	4869.6	4883.4	4952.7	5061.8	5210.7	5323.3	5390.8	5454.9	5487.8	5498.2
15°	4805.5	4802.0	4836.7	4947.5	5103.4	5300.8	5456.6	5562.3	5654.0	5690.4	5704.3
17.5°	4724.1	4725.8	4788.2	4945.8	5153.6	5406.4	5605.6	5756.2	5868.8	5920.7	5936.3
20°	4634.1	4639.3	4732.8	4944.0	5215.9	5524.2	5770.1	5967.5	6107.8	6177.0	6199.5
22.5°	4528.4	4538.8	4672.2	4945.8	5281.7	5659.2	5964.0	6199.5	6367.5	6450.6	6478.3
25°	4415.9	4431.5	4609.8	4954.4	5364.8	5822.0	6185.7	6461.0	6630.7	6703.5	6734.6
27.5°	4286.0	4312.0	4542.3	4966.6	5463.6	6010.8	6412.5	6677.5	6835.1	6890.5	6918.2
30°	4147.5	4176.9	4476.5	4990.8	5591.7	6216.9	6622.1	6845.5	6951.1	6982.3	6997.9
32.5°	3995.1	4043.6	4410.7	5030.6	5742.4	6416.0	6776.2	6909.5	6935.5	6925.1	6930.3
35°	3827.1	3879.0	4348.3	5096.4	5913.8	6590.9	6836.8	6836.8	6760.6	6713.9	6710.4
37.5°	3648.7	3714.5	4286.0	5172.6	6112.9	6706.9	6771.0	6599.6	6414.3	6313.8	6298.2
40°	3454.8	3543.1	4242.7	5276.5	6293.0	6715.6	6535.5	6182.2	5867.0	5704.3	5685.2
42.5°	3262.5	3371.6	4223.6	5411.6	6428.1	6556.3	6092.2	5546.7	5118.9	4926.7	4905.9
45°	3051.3	3195.0	4230.6	5596.9	6464.5	6175.3	5432.4	4725.8	4246.2	4003.7	3982.9
47.5°	2841.7	3020.1	4247.9	5806.4	6305.2	5529.4	4554.4	3737.0	3260.8	3006.3	3002.8
50°	2623.5	2855.6	4289.5	5977.9	5874.0	4639.3	3475.5	2677.2	2296.3	2102.3	2086.7
52.5°	2396.7	2711.9	4379.5	6009.0	5106.8	3496.3	2358.6	1787.1	1539.5	1416.5	1392.3
55°	2182.0	2590.6	4526.7	5728.5	4003.7	2277.2	1485.8	1127.3	1002.7	952.4	957.6
57.5°	1996.7	2500.6	4698.1	4996.0	2599.3	1340.3	860.7	749.8	746.4	751.6	753.3
60°	1846.0	2445.2	4774.3	3747.4	1426.9	692.7	600.9	625.1	658.1	677.1	680.6
62.5°	1747.3	2415.7	4542.3	2171.6	633.8	483.1	524.7	569.7	607.8	625.1	626.9
65°	1681.5	2337.8	3716.3	1073.7	387.9	426.0	478.0	524.7	559.3	573.2	576.7
67.5°	1579.3	2117.9	2547.4	445.1	341.1	384.4	434.7	479.7	509.1	519.5	521.2
70°	1343.8	1773.3	1480.6	296.1	308.2	353.3	393.1	427.7	446.8	452.0	450.2
72.5°	1049.4	1404.4	748.1	268.4	285.7	310.0	332.5	351.5	361.9	367.1	367.1
75°	768.9	1026.9	351.5	237.2	213.0	233.8	256.3	268.4	271.9	273.6	273.6
77.5°	516.1	708.3	209.5	183.6	164.5	181.8	190.5	185.3	181.8	185.3	185.3
80°	311.7	436.4	183.6	133.3	126.4	128.1	121.2	121.2	128.1	131.6	129.9
82.5°	168.0	247.6	161.0	97.0	84.9	77.9	76.2	72.7	69.3	67.5	67.5
85°	77.9	126.4	103.9	58.9	45.0	32.9	26.0	19.0	17.3	13.9	13.9
87.5°	31.2	48.5	31.2	19.0	10.4	6.9	5.2	3.5	1.7	1.7	1.7
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)