

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: P685721

Luminaire Tested: **4CZL-9-UNV-N-LVR-L835-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685721
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-N-LVR-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @80 CRI and 3500K
Light Source: (588) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

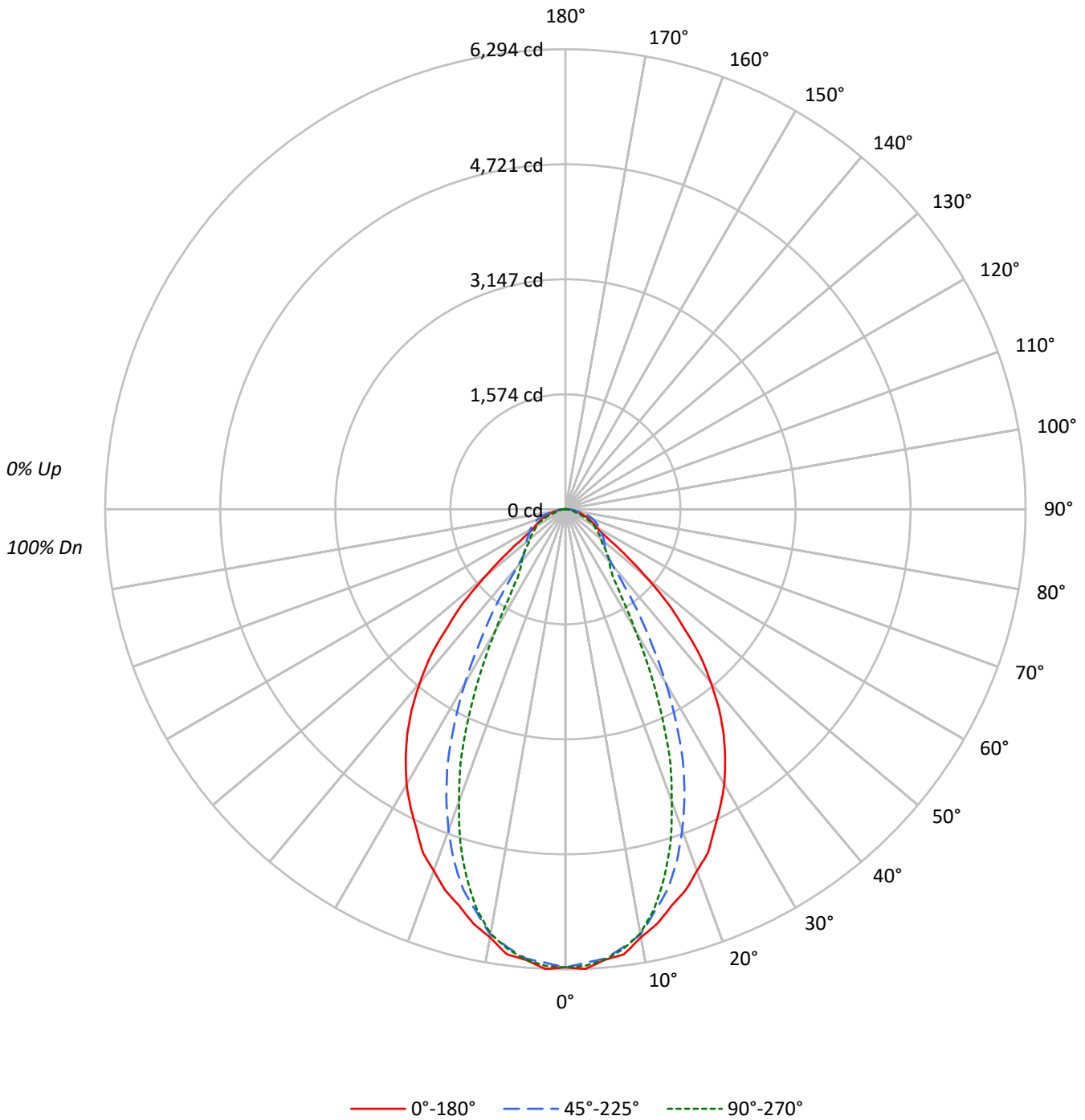
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7419.9 lumens
Efficiency: N/A
Efficacy: 137.4 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.8 / 0.85
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 54
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				
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	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	93	92	90	88
2	103	97	92	87	101	95	90	86	92	88	84	88	85	82	86	83	80	86	83	80	78
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	79	75	72	70
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	73	69	65	63
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	68	63	59	58
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55	63	58	55	53
7	75	64	57	51	73	63	56	51	62	55	51	60	55	51	59	54	50	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	55	50	47	45
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	43	52	47	43	42
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	49	44	41	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20237	20237	20237
5°	20058	20001	20053
10°	19492	19372	19325
15°	18770	18020	17449
20°	18078	16053	14613
25°	17179	13555	11143
30°	16205	10253	7119
35°	14874	6951	4473
40°	13044	4235	3924
45°	10451	3528	3516
50°	7226	3486	3174
55°	4257	3456	2989
60°	3172	3590	2953
65°	3002	3615	2596
70°	2887	3855	1960
75°	2722	3869	1676
80°	2527	3210	1895
85°	2242	3894	2342



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	582.2	7.8
10°-20°	1507.4	20.3
20°-30°	1760.9	23.7
30°-40°	1306.4	17.6
40°-50°	866.1	11.7
50°-60°	574.4	7.7
60°-70°	428.6	5.8
70°-80°	252.9	3.4
80°-90°	106.5	1.4
90°-100°	23.0	0.3
100°-110°	3.1	0.0
110°-120°	1.6	0.0
120°-130°	1.4	0.0
130°-140°	1.4	0.0
140°-150°	1.4	0.0
150°-160°	1.3	0.0
160°-170°	0.9	0.0
170°-180°	0.4	0.0
0°-30°	3850.5	51.9
0°-40°	5156.9	69.5
0°-60°	6597.3	88.9
0°-90°	7385.3	99.5
90°-120°	27.7	0.4
90°-150°	32.0	0.4
90°-180°	35.0	0.5
0°-180°	7419.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6267	6267	6267	6267	6267	
5°	6188	6182	6170	6193	6186	585
15°	5614	5548	5390	5297	5219	1584
25°	4822	4475	3804	3263	3127	2221
35°	3773	2796	1763	1192	1135	2342
45°	2288	1350	772	802	770	1761
55°	756	664	614	593	531	744
65°	393	439	473	462	340	392
75°	218	244	310	225	134	230
85°	60	74	105	140	63	65
90°	1	22	53	90	19	4
95°	0	4	21	45	10	0
105°	0	1	2	4	3	1
115°	0	1	2	2	2	0
125°	1	1	2	2	2	1
135°	1	2	2	2	2	1
145°	2	2	2	3	3	1
155°	2	3	3	3	3	1
165°	3	3	3	4	4	1
175°	3	3	4	4	5	0
180°	4	4	4	4	4	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6266.9	6266.9	6266.9	6266.9	6266.9
2.5°	6294.0	6260.0	6211.2	6255.2	6251.5
5°	6187.8	6182.5	6170.3	6192.6	6186.2
7.5°	6140.0	6111.3	6043.4	6096.0	6066.2
10°	5944.6	5911.2	5908.0	5897.4	5893.7
12.5°	5806.0	5765.7	5636.7	5629.8	5601.1
15°	5614.4	5547.5	5390.3	5297.4	5219.3
17.5°	5465.7	5320.2	5057.9	4884.8	4784.5
20°	5260.8	5100.4	4671.4	4369.3	4252.5
22.5°	5091.9	4807.8	4256.2	3828.8	3748.6
25°	4821.6	4474.9	3804.3	3263.3	3127.4
27.5°	4587.0	4108.6	3271.2	2677.6	2510.9
30°	4345.9	3698.1	2749.8	2103.1	1909.3
32.5°	4065.0	3284.5	2213.0	1578.0	1437.8
35°	3773.0	2795.5	1763.3	1192.0	1134.7
37.5°	3451.2	2355.9	1325.3	995.5	1005.1
40°	3094.4	1972.5	1004.6	912.7	930.8
42.5°	2738.7	1649.7	835.7	858.6	863.9
45°	2288.4	1350.2	772.5	801.7	769.9
47.5°	1895.0	1103.3	727.9	724.8	679.6
50°	1438.4	899.4	694.0	655.7	631.8
52.5°	1065.1	758.7	661.6	619.6	595.2
55°	756.1	664.2	613.8	592.6	531.0
57.5°	568.1	597.3	577.2	529.4	486.4
60°	491.1	538.4	555.9	499.1	457.2
62.5°	443.4	488.0	521.4	481.0	418.4
65°	392.9	439.1	473.1	462.5	339.8
67.5°	348.8	400.3	442.3	396.6	277.7
70°	305.8	353.6	408.3	336.6	207.6
72.5°	259.6	295.7	361.6	261.8	151.3
75°	218.2	244.2	310.1	225.1	134.3
77.5°	174.7	196.5	212.4	205.0	118.4
80°	135.9	157.7	172.6	186.4	101.9
82.5°	98.8	113.1	137.0	165.1	85.0
85°	60.5	73.8	105.1	139.6	63.2
87.5°	26.0	45.1	77.0	115.7	41.4
90°	1.1	22.3	52.6	90.3	18.6
92.5°	0.5	9.6	34.0	66.4	12.2
95°	0.5	3.7	20.7	45.1	9.6
97.5°	0.5	1.6	10.6	29.2	6.9
100°	0.5	1.1	5.8	17.0	4.8
102.5°	0.5	1.1	2.7	8.5	3.7
105°	0.5	1.1	2.1	3.7	3.2
107.5°	0.5	1.1	1.6	2.7	2.7
110°	0.5	1.1	1.6	2.7	2.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.5	1.1	1.6	2.7	2.7
115°	0.5	1.1	1.6	2.1	2.1
117.5°	0.5	1.1	1.6	2.1	2.1
120°	0.5	1.1	1.6	2.1	2.1
122.5°	0.5	1.1	1.6	2.1	2.1
125°	1.1	1.1	1.6	2.1	2.1
127.5°	1.1	1.6	1.6	2.1	2.1
130°	1.1	1.6	1.6	2.1	2.1
132.5°	1.1	1.6	1.6	2.1	2.1
135°	1.1	1.6	1.6	2.1	2.1
137.5°	1.1	1.6	2.1	2.1	2.1
140°	1.6	2.1	2.1	2.1	2.1
142.5°	1.6	2.1	2.1	2.7	2.1
145°	1.6	2.1	2.1	2.7	2.7
147.5°	1.6	2.1	2.7	2.7	2.7
150°	1.6	2.1	2.7	3.2	3.2
152.5°	2.1	2.1	2.7	3.2	3.2
155°	2.1	2.7	2.7	3.2	3.2
157.5°	2.1	2.7	2.7	3.2	3.7
160°	2.1	2.7	3.2	3.7	3.7
162.5°	2.1	2.7	3.2	3.7	3.7
165°	2.7	3.2	3.2	3.7	3.7
167.5°	2.7	3.2	3.7	3.7	4.2
170°	2.7	3.2	3.7	4.2	4.2
172.5°	2.7	3.2	3.7	4.2	4.2
175°	2.7	3.2	3.7	4.2	4.8
177.5°	2.7	3.2	3.7	4.2	4.8
180°	3.7	3.7	3.7	3.7	3.7

(END OF REPORT)