

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: P685899

Luminaire Tested: **4CZL-5-UNV-LVRF-L835-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685899
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-LVRF-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH FROSTED LAY-IN @80 CRI and 3500K
Light Source: (392) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

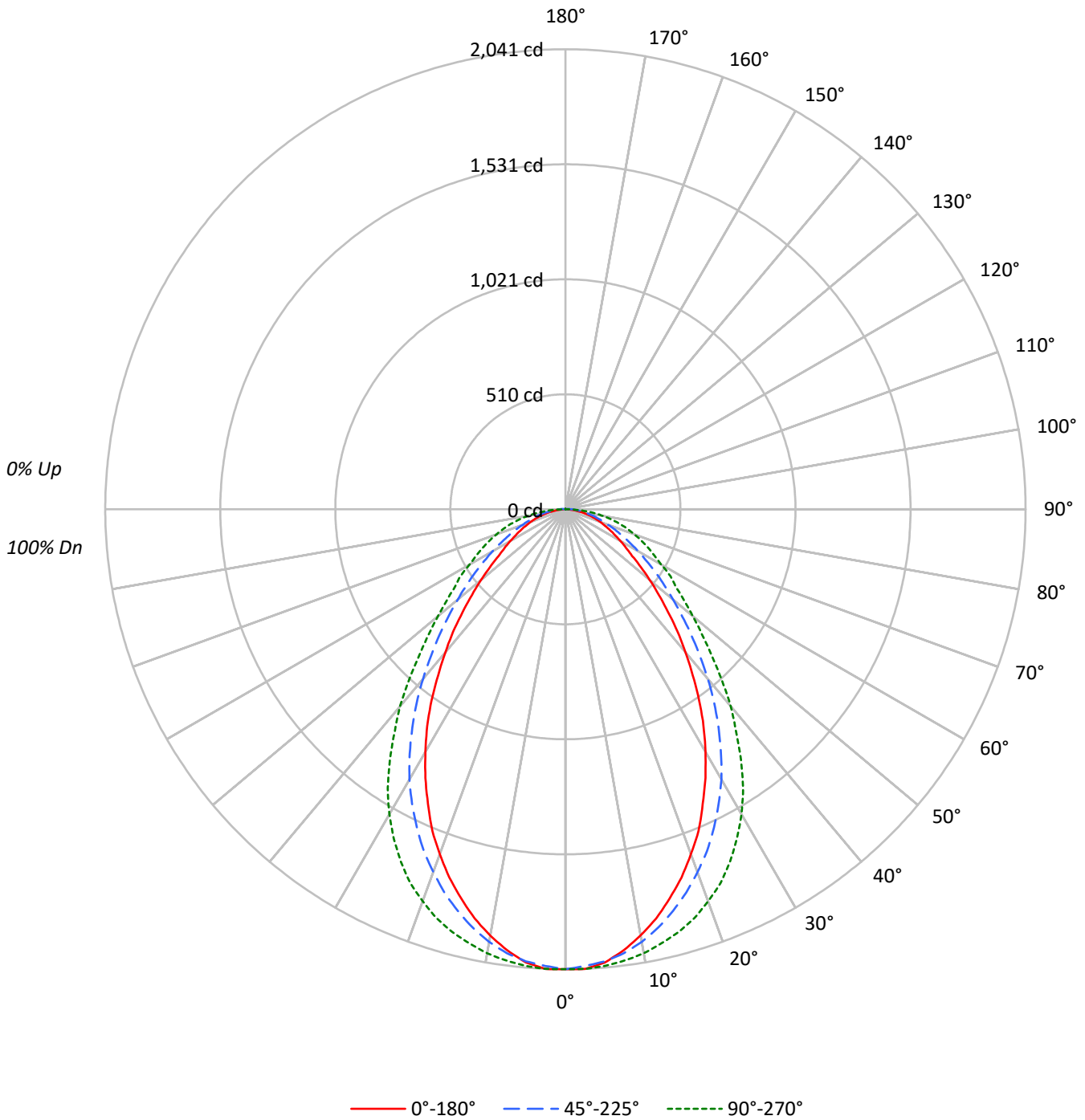
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3763.9 lumens
Efficiency: N/A
Efficacy: 121.4 lumens/watt
Spacing Criteria (0/90/45): 0.97 / 1.15 / 1.12
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31
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

TEST NUMBER: P685899
CATALOG NUMBER: 4CZL-5-UNV-LVRF-L835-CD-U

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	82	79	76	74
3	94	84	77	71	91	83	76	70	80	74	69	77	72	68	74	70	67	65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51
6	75	63	55	49	73	62	54	48	60	53	48	58	52	48	57	51	47	45
7	70	57	49	44	68	57	49	44	55	48	43	54	48	43	52	47	43	41
8	65	53	45	40	64	52	45	40	51	44	39	50	44	39	49	43	39	37
9	61	49	41	36	60	48	41	36	47	41	36	46	40	36	45	40	36	34
10	58	46	38	33	57	45	38	33	44	38	33	43	37	33	42	37	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6589	6589	6589
5°	6541	6526	6591
10°	6296	6389	6559
15°	5974	6166	6490
20°	5595	5885	6360
25°	5138	5552	6150
30°	4631	5160	5824
35°	4078	4667	5349
40°	3491	4143	4810
45°	2941	3612	4189
50°	2456	3130	3703
55°	2032	2750	3358
60°	1832	2411	3167
65°	1665	2122	3097
70°	1550	1904	3073
75°	1437	1778	3135
80°	1304	1761	3141
85°	1119	2064	3109



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	190.9	5.1
10°-20°	521.7	13.9
20°-30°	720.9	19.2
30°-40°	741.6	19.7
40°-50°	608.0	16.2
50°-60°	436.3	11.6
60°-70°	293.4	7.8
70°-80°	171.3	4.6
80°-90°	66.0	1.8
90°-100°	11.4	0.3
100°-110°	1.0	0.0
110°-120°	0.2	0.0
120°-130°	0.2	0.0
130°-140°	0.2	0.0
140°-150°	0.3	0.0
150°-160°	0.3	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1433.5	38.1
0°-40°	2175.1	57.8
0°-60°	3219.4	85.5
0°-90°	3750.0	99.6
90°-120°	12.6	0.3
90°-150°	13.3	0.4
90°-180°	14.0	0.4
0°-180°	3763.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2040	2040	2040	2040	2040	
5°	2018	2019	2013	2032	2033	189
15°	1787	1805	1844	1916	1941	501
25°	1442	1476	1558	1667	1726	662
35°	1034	1082	1184	1295	1357	645
45°	644	694	791	869	917	500
55°	361	404	488	555	596	332
65°	218	231	278	357	405	217
75°	115	119	142	198	251	122
85°	30	38	56	83	84	33
90°	0	13	28	43	9	2
95°	0	2	12	21	4	0
105°	0	0	1	1	1	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	1	0	0	0	0
145°	1	1	1	0	0	0
155°	1	1	1	0	0	0
165°	1	1	1	1	0	0
175°	1	1	1	1	1	0
180°	1	1	1	1	1	



TEST NUMBER: P685899

CATALOG NUMBER: 4CZL-5-UNV-LVRF-L835-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2040.4	2040.4	2040.4	2040.4	2040.4
2.5°	2041.2	2039.5	2028.0	2041.2	2040.7
5°	2017.8	2019.2	2013.1	2031.9	2033.3
7.5°	1974.1	1980.0	1986.7	2014.3	2019.2
10°	1920.1	1928.9	1948.6	1989.6	2000.2
12.5°	1859.4	1869.1	1901.1	1957.7	1972.3
15°	1787.0	1805.2	1844.5	1916.0	1941.2
17.5°	1712.2	1734.5	1783.2	1867.9	1901.9
20°	1628.1	1650.4	1712.5	1806.9	1850.9
22.5°	1543.6	1565.3	1641.3	1741.8	1796.7
25°	1441.9	1475.6	1558.3	1666.8	1726.0
27.5°	1344.5	1380.3	1472.4	1588.8	1647.7
30°	1241.9	1283.8	1383.8	1494.9	1561.8
32.5°	1140.1	1182.6	1284.7	1400.5	1466.8
35°	1034.5	1082.3	1183.8	1294.7	1356.8
37.5°	927.5	979.7	1084.1	1193.2	1243.3
40°	828.1	879.4	982.9	1080.6	1141.0
42.5°	736.3	786.8	882.6	971.2	1025.5
45°	644.0	694.1	790.9	868.6	917.3
47.5°	561.3	612.6	702.6	781.2	821.9
50°	488.8	535.5	623.1	694.4	737.2
52.5°	422.6	465.1	551.9	621.1	662.4
55°	361.0	404.1	488.5	555.4	596.4
57.5°	319.6	350.4	426.4	500.6	553.3
60°	283.6	302.6	373.3	461.3	490.3
62.5°	246.9	264.2	322.3	399.7	444.8
65°	217.9	230.8	277.7	356.6	405.3
67.5°	189.1	198.8	239.0	314.9	364.2
70°	164.2	170.4	201.7	273.9	325.5
72.5°	140.5	143.7	171.8	236.4	287.7
75°	115.2	119.3	142.5	197.9	251.3
77.5°	91.2	97.1	117.6	165.1	209.7
80°	70.1	74.8	94.7	135.8	168.9
82.5°	48.7	55.1	73.9	107.3	129.3
85°	30.2	37.5	55.7	83.3	83.9
87.5°	12.6	23.5	40.8	61.6	42.8
90°	0.3	12.6	28.4	43.4	9.1
92.5°	0.0	5.9	19.4	31.1	5.3
95°	0.3	2.1	12.0	20.8	3.8
97.5°	0.0	0.6	6.5	13.2	2.3
100°	0.0	0.3	2.6	7.3	1.5
102.5°	0.0	0.3	1.2	3.2	0.9
105°	0.0	0.3	0.6	1.2	0.6
107.5°	0.0	0.3	0.3	0.3	0.3
110°	0.3	0.3	0.3	0.3	0.0



TEST NUMBER: P685899
 CATALOG NUMBER: 4CZL-5-UNV-LVRF-L835-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.0	0.3	0.3	0.0	0.0
115°	0.3	0.3	0.3	0.0	0.0
117.5°	0.3	0.3	0.3	0.0	0.0
120°	0.3	0.3	0.3	0.0	0.0
122.5°	0.3	0.3	0.3	0.0	0.0
125°	0.3	0.3	0.3	0.0	0.0
127.5°	0.3	0.3	0.3	0.0	0.0
130°	0.3	0.3	0.3	0.0	0.0
132.5°	0.3	0.6	0.3	0.3	0.0
135°	0.3	0.6	0.3	0.3	0.0
137.5°	0.3	0.6	0.3	0.3	0.0
140°	0.3	0.6	0.3	0.3	0.3
142.5°	0.6	0.6	0.6	0.3	0.3
145°	0.6	0.6	0.6	0.3	0.3
147.5°	0.6	0.6	0.6	0.3	0.3
150°	0.6	0.6	0.6	0.3	0.3
152.5°	0.6	0.9	0.6	0.3	0.3
155°	0.6	0.9	0.6	0.3	0.3
157.5°	0.6	0.9	0.6	0.3	0.3
160°	0.6	0.9	0.6	0.3	0.3
162.5°	0.9	0.9	0.6	0.6	0.3
165°	0.9	0.9	0.9	0.6	0.3
167.5°	0.9	0.9	0.9	0.6	0.3
170°	0.9	0.9	0.9	0.6	0.6
172.5°	0.9	0.9	0.9	0.6	0.6
175°	0.9	1.2	0.9	0.6	0.6
177.5°	0.9	1.2	0.9	0.6	0.6
180°	0.9	0.9	0.9	0.9	0.9

(END OF REPORT)