

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: P685659

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685659
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-LVR-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL @80 CRI and 3500K
Light Source: (392) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

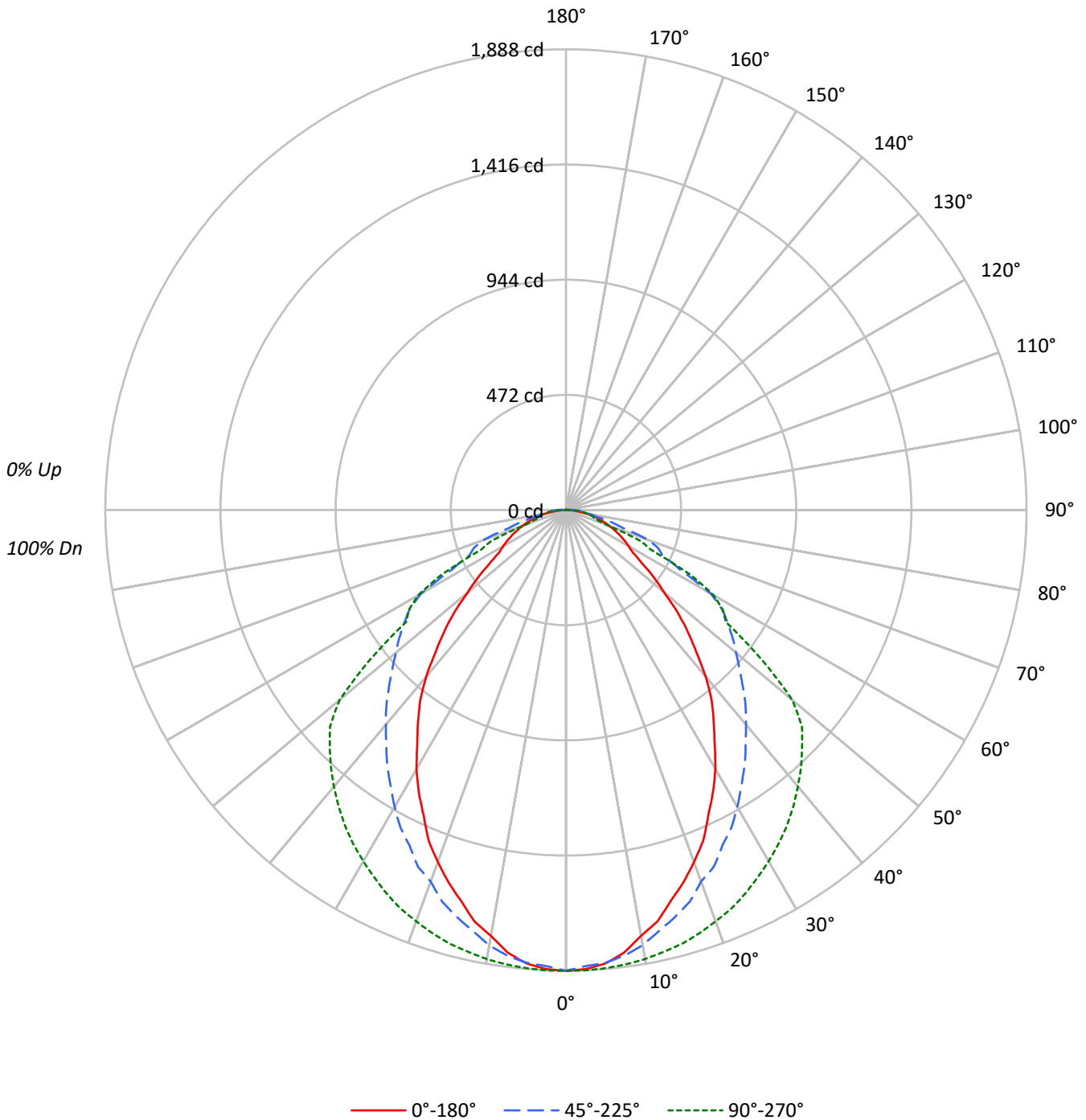
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4276.1 lumens
Efficiency: N/A
Efficacy: 137.9 lumens/watt
Spacing Criteria (0/90/45): 1.01 / 1.31 / 1.26
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

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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	102	102	102	100
1	110	105	101	98	107	103	99	96	99	96	93	95	92	90	91	89	88	88	88	88	85
2	101	93	87	81	98	91	85	80	88	83	78	84	80	77	81	78	75	75	75	75	73
3	92	82	75	69	90	81	74	68	78	72	67	75	70	66	73	68	65	65	65	65	63
4	85	74	65	59	83	72	65	59	70	63	58	68	62	57	65	60	56	56	56	56	54
5	78	66	58	51	76	65	57	51	63	56	51	61	55	50	59	54	49	49	49	49	47
6	73	60	51	45	71	59	51	45	57	50	45	56	49	44	54	48	44	44	44	44	42
7	68	55	46	40	66	54	46	40	52	45	40	51	44	40	49	44	39	39	39	39	37
8	63	50	42	36	61	49	42	36	48	41	36	47	40	36	46	40	35	35	35	35	34
9	59	46	38	33	58	45	38	33	44	37	32	43	37	32	42	36	32	32	32	32	30
10	55	43	35	30	54	42	35	30	41	34	30	40	34	29	39	34	29	29	29	29	28

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6097	6097	6097
5°	6044	6036	6108
10°	5810	5938	6126
15°	5546	5771	6151
20°	5273	5567	6165
25°	4918	5406	6185
30°	4566	5240	6195
35°	4163	5034	6224
40°	3756	4838	6235
45°	3230	4683	6251
50°	2640	4573	6087
55°	2150	4555	4502
60°	1917	4428	4517
65°	1853	3323	2913
70°	1781	3406	1656
75°	1716	2401	1478
80°	1566	1953	1761
85°	1401	2434	2193



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.9	4.1
10°-20°	490.3	11.5
20°-30°	709.3	16.6
30°-40°	809.6	18.9
40°-50°	795.5	18.6
50°-60°	634.5	14.8
60°-70°	399.7	9.3
70°-80°	177.1	4.1
80°-90°	67.9	1.6
90°-100°	13.5	0.3
100°-110°	0.9	0.0
110°-120°	0.1	0.0
120°-130°	0.1	0.0
130°-140°	0.2	0.0
140°-150°	0.2	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1376.5	32.2
0°-40°	2186.1	51.1
0°-60°	3616.1	84.6
0°-90°	4260.8	99.6
90°-120°	14.5	0.3
90°-150°	15.0	0.4
90°-180°	15.0	0.4
0°-180°	4276.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1888	1888	1888	1888	1888	
5°	1865	1869	1862	1878	1884	175
15°	1659	1675	1726	1807	1840	467
25°	1380	1425	1517	1656	1736	636
35°	1056	1120	1277	1465	1579	660
45°	707	810	1026	1255	1369	544
55°	382	517	809	872	800	351
65°	242	330	435	463	381	240
75°	138	159	192	146	118	144
85°	38	46	66	85	59	40
90°	0	16	35	50	10	2
95°	0	2	14	25	3	0
105°	0	0	0	1	0	0
115°	0	0	0	0	0	0
125°	0	1	0	0	0	0
135°	0	1	0	0	0	0
145°	1	1	0	0	0	0
155°	1	1	0	0	0	0
165°	1	1	1	0	0	0
175°	1	1	1	0	0	0
180°	1	1	1	1	1	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1888.2	1888.2	1888.2	1888.2	1888.2
2.5°	1883.2	1882.0	1870.6	1886.7	1888.5
5°	1864.7	1868.8	1862.1	1877.6	1884.4
7.5°	1829.2	1833.6	1841.5	1870.0	1878.2
10°	1771.8	1782.9	1810.8	1850.6	1868.2
12.5°	1727.8	1741.6	1766.5	1834.2	1854.5
15°	1658.9	1675.3	1726.3	1807.2	1839.8
17.5°	1600.2	1630.1	1684.4	1773.2	1818.7
20°	1534.5	1558.6	1619.9	1739.8	1794.0
22.5°	1468.8	1499.3	1582.9	1695.2	1769.1
25°	1380.3	1424.9	1517.2	1656.2	1736.0
27.5°	1305.2	1361.5	1467.7	1610.2	1699.0
30°	1224.6	1268.3	1405.2	1563.3	1661.5
32.5°	1133.7	1202.3	1337.8	1509.6	1622.2
35°	1056.0	1119.9	1277.1	1465.3	1578.8
37.5°	980.9	1041.0	1209.9	1415.2	1530.7
40°	890.9	970.0	1147.7	1358.0	1479.1
42.5°	791.2	888.2	1090.0	1304.0	1426.6
45°	707.3	810.2	1025.5	1255.1	1368.8
47.5°	620.2	728.7	965.1	1195.5	1311.7
50°	525.5	657.4	910.2	1140.4	1211.7
52.5°	456.3	583.3	861.0	1040.7	1021.4
55°	381.8	517.0	809.1	872.4	799.7
57.5°	325.2	457.2	760.4	685.0	763.3
60°	296.8	409.4	685.6	652.2	699.4
62.5°	270.1	367.4	524.3	611.7	575.3
65°	242.5	330.2	434.9	463.3	381.2
67.5°	215.8	297.9	410.0	346.0	331.9
70°	188.6	273.0	360.7	295.0	175.4
72.5°	162.7	244.3	246.6	163.3	130.2
75°	137.5	158.9	192.4	145.7	118.5
77.5°	110.0	136.4	128.7	130.5	107.3
80°	84.2	93.8	105.0	116.7	94.7
82.5°	59.5	69.8	85.0	102.0	77.7
85°	37.8	46.0	65.7	84.7	59.2
87.5°	15.0	29.0	49.0	68.3	34.9
90°	0.3	15.8	34.6	50.4	9.7
92.5°	0.3	7.3	23.2	36.9	5.0
95°	0.3	2.3	14.4	24.6	3.2
97.5°	0.3	0.9	7.6	15.2	1.8
100°	0.3	0.3	3.2	8.2	0.9
102.5°	0.3	0.3	1.2	3.2	0.3
105°	0.3	0.3	0.3	0.9	0.0
107.5°	0.3	0.3	0.0	0.0	0.0
110°	0.3	0.3	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)