

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: P685859

Luminaire Tested: **4CZL-5-UNV-W-LVR-L850-CD-U**

Issue Date: 05/10/2023

Test Information

Test Method: LM-79-08
Report Number: P685859
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-W-LVR-L850-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @80 CRI and
5000K
Light Source: (392) 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

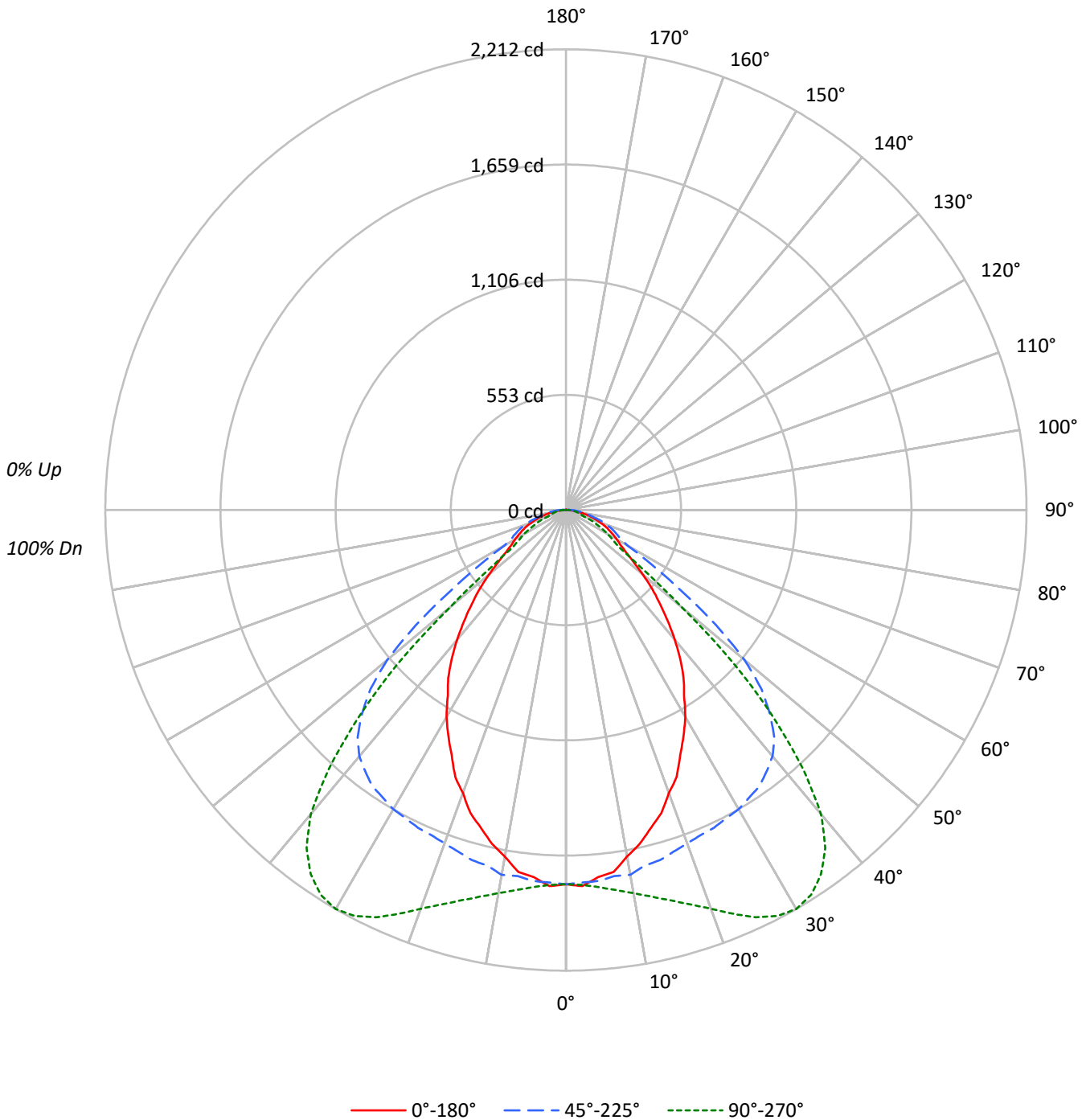
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4275.0 lumens
Efficiency: N/A
Efficacy: 137.9 lumens/watt
Spacing Criteria (0/90/45): 1 / 1.64 / 1.46
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 (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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CATALOG NUMBER: 4CZL-5-UNV-W-LVR-L850-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	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	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87				
2	102	95	89	84	99	93	88	83	89	85	81	86	82	79	83	80	77	75				
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				
4	87	76	68	62	85	75	68	62	72	66	61	70	65	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	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45				
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	40				
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	36				
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	33				
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	30				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5803	5803	5803
5°	5736	5796	5890
10°	5538	5831	6125
15°	5278	5820	6485
20°	4968	5851	7000
25°	4625	5995	7688
30°	4276	6185	8247
35°	3885	6385	8420
40°	3425	6506	8033
45°	2920	6328	6440
50°	2420	5627	3654
55°	1971	3802	1748
60°	1819	2211	1510
65°	1754	2034	1228
70°	1655	1995	877
75°	1541	1822	852
80°	1404	1789	937
85°	1078	2142	1034



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.8	4.0
10°-20°	496.0	11.6
20°-30°	787.1	18.4
30°-40°	983.0	23.0
40°-50°	902.9	21.1
50°-60°	481.8	11.3
60°-70°	248.0	5.8
70°-80°	136.4	3.2
80°-90°	56.3	1.3
90°-100°	10.9	0.3
100°-110°	0.6	0.0
110°-120°	0.1	0.0
120°-130°	0.2	0.0
130°-140°	0.3	0.0
140°-150°	0.3	0.0
150°-160°	0.2	0.0
160°-170°	0.2	0.0
170°-180°	0.1	0.0
0°-30°	1453.9	34.0
0°-40°	2436.9	57.0
0°-60°	3821.6	89.4
0°-90°	4262.2	99.7
90°-120°	11.6	0.3
90°-150°	12.4	0.3
90°-180°	13.0	0.3
0°-180°	4275.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1797	1797	1797	1797	1797	
5°	1770	1774	1788	1815	1817	167
15°	1579	1630	1741	1883	1940	444
25°	1298	1420	1683	1991	2158	598
35°	986	1167	1620	1973	2136	612
45°	639	922	1386	1436	1410	495
55°	350	628	675	378	310	323
65°	230	301	266	217	161	227
75°	124	137	146	130	68	131
85°	29	38	58	76	28	33
90°	0	11	28	46	6	1
95°	0	1	11	21	3	0
105°	0	0	0	0	0	0
115°	0	0	0	0	0	0
125°	0	0	0	0	0	0
135°	0	1	1	0	0	0
145°	0	1	1	0	0	0
155°	1	1	1	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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CATALOG NUMBER: 4CZL-5-UNV-W-LVR-L850-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1796.9	1796.9	1796.9	1796.9	1796.9
2.5°	1807.3	1803.4	1790.6	1802.2	1801.4
5°	1769.6	1774.1	1787.9	1815.4	1817.2
7.5°	1752.8	1765.1	1772.9	1832.5	1840.3
10°	1689.0	1708.1	1778.3	1840.3	1867.9
12.5°	1641.0	1679.7	1747.7	1852.9	1900.9
15°	1578.7	1630.2	1740.8	1882.6	1939.8
17.5°	1525.6	1578.4	1719.8	1905.1	1985.1
20°	1445.6	1541.2	1702.7	1928.4	2036.9
22.5°	1388.3	1485.1	1689.6	1949.1	2098.4
25°	1298.1	1420.1	1682.7	1990.8	2157.7
27.5°	1222.6	1365.2	1667.4	2017.5	2197.0
30°	1146.8	1298.1	1658.7	2022.2	2211.7
32.5°	1055.3	1243.6	1636.8	2011.2	2190.7
35°	985.5	1167.4	1619.7	1973.1	2135.8
37.5°	900.4	1107.5	1582.3	1904.2	2045.9
40°	812.6	1052.0	1543.3	1796.6	1905.7
42.5°	723.8	989.7	1480.9	1653.0	1686.3
45°	639.3	921.7	1385.6	1436.0	1410.2
47.5°	563.5	848.5	1272.9	1163.8	1103.3
50°	481.7	774.2	1120.1	886.0	727.4
52.5°	407.9	712.1	909.7	600.1	452.6
55°	350.1	627.6	675.3	378.3	310.5
57.5°	309.0	562.9	487.4	299.1	265.9
60°	281.7	482.0	342.3	274.5	233.8
62.5°	254.8	381.3	292.8	250.3	196.6
65°	229.6	300.9	266.2	217.0	160.7
67.5°	203.5	244.3	240.4	196.9	134.0
70°	175.3	200.8	211.3	164.8	92.9
72.5°	150.2	168.4	179.8	140.9	78.8
75°	123.5	137.0	146.0	129.8	68.3
77.5°	98.0	110.3	119.0	117.5	59.9
80°	75.5	83.6	96.2	105.2	50.4
82.5°	51.6	57.5	75.8	90.8	39.3
85°	29.1	38.1	57.8	76.1	27.9
87.5°	8.4	22.5	42.0	61.1	16.2
90°	0.0	10.8	28.5	46.2	6.0
92.5°	0.0	4.2	18.6	32.4	4.2
95°	0.0	1.2	10.8	21.3	2.7
97.5°	0.0	0.3	5.1	12.6	1.2
100°	0.0	0.3	1.8	6.0	0.3
102.5°	0.0	0.3	0.6	2.1	0.0
105°	0.0	0.3	0.3	0.3	0.0
107.5°	0.0	0.3	0.3	0.0	0.0
110°	0.0	0.3	0.3	0.0	0.0



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 CATALOG NUMBER: 4CZL-5-UNV-W-LVR-L850-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°	0.0	0.3	0.3	0.0	0.0
117.5°	0.0	0.3	0.3	0.0	0.0
120°	0.0	0.3	0.3	0.0	0.0
122.5°	0.0	0.3	0.3	0.0	0.0
125°	0.0	0.3	0.3	0.0	0.0
127.5°	0.3	0.3	0.3	0.3	0.0
130°	0.3	0.6	0.6	0.3	0.0
132.5°	0.3	0.6	0.6	0.3	0.0
135°	0.3	0.6	0.6	0.3	0.3
137.5°	0.3	0.6	0.6	0.3	0.3
140°	0.3	0.6	0.6	0.3	0.3
142.5°	0.3	0.6	0.6	0.3	0.3
145°	0.3	0.6	0.6	0.3	0.3
147.5°	0.3	0.6	0.6	0.3	0.3
150°	0.3	0.6	0.6	0.3	0.3
152.5°	0.6	0.6	0.6	0.3	0.3
155°	0.6	0.6	0.6	0.3	0.3
157.5°	0.6	0.6	0.6	0.3	0.3
160°	0.6	0.6	0.6	0.3	0.3
162.5°	0.6	0.9	0.6	0.3	0.3
165°	0.6	0.9	0.6	0.3	0.3
167.5°	0.6	0.9	0.6	0.3	0.3
170°	0.6	0.9	0.6	0.3	0.3
172.5°	0.6	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	0.6	0.6
180°	0.6	0.6	0.6	0.6	0.6

(END OF REPORT)