

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: P685849

Luminaire Tested: **4CZL-5-UNV-W-LVR-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685849
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-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH WIDE LENS @80 CRI and 4000K
Light Source: (392) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

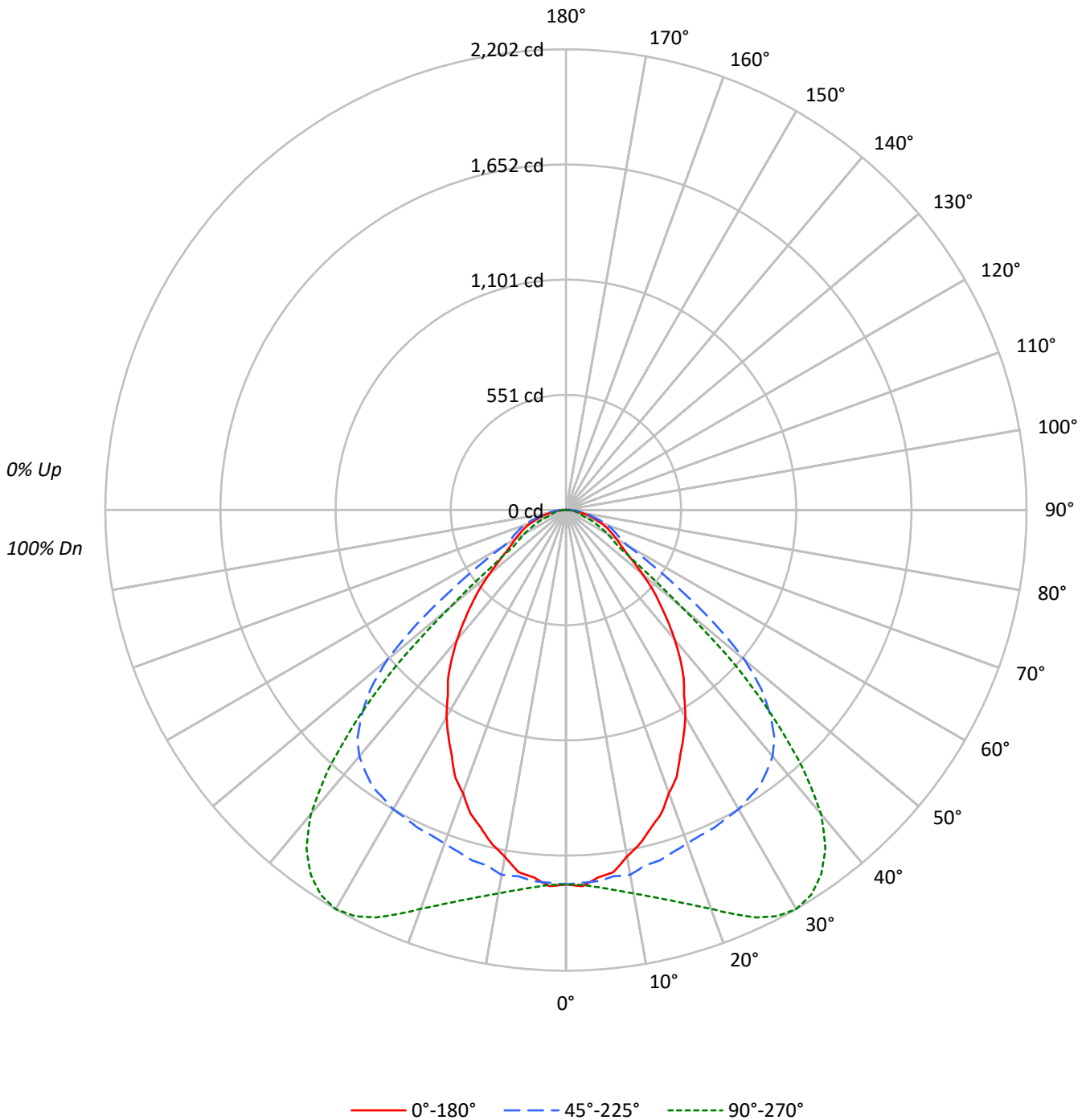
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4257.2 lumens
Efficiency: N/A
Efficacy: 137.3 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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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	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	89	89	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	77	77	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	68	68	68	66
4	87	76	68	62	85	75	68	62	72	66	61	70	65	60	68	63	59	59	59	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	53	53	53	51
6	75	62	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	47	47	47	45
7	69	57	49	43	68	56	48	43	55	48	43	53	47	42	52	46	42	42	42	42	40
8	65	52	44	39	63	51	44	39	50	43	38	49	43	38	48	42	38	38	38	38	36
9	61	48	40	35	59	47	40	35	46	40	35	45	39	35	44	39	34	34	34	34	33
10	57	44	37	32	56	44	37	32	43	36	32	42	36	32	41	35	31	31	31	31	30

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5778	5778	5778
5°	5712	5771	5866
10°	5515	5806	6099
15°	5256	5795	6458
20°	4947	5827	6970
25°	4606	5970	7656
30°	4258	6159	8212
35°	3869	6358	8384
40°	3411	6478	8000
45°	2907	6301	6413
50°	2409	5603	3639
55°	1963	3786	1741
60°	1812	2202	1504
65°	1747	2025	1223
70°	1648	1986	873
75°	1535	1814	850
80°	1398	1782	932
85°	1074	2134	1030



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	170.1	4.0
10°-20°	493.9	11.6
20°-30°	783.8	18.4
30°-40°	978.9	23.0
40°-50°	899.1	21.1
50°-60°	479.8	11.3
60°-70°	247.0	5.8
70°-80°	135.8	3.2
80°-90°	56.0	1.3
90°-100°	10.8	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°	1447.8	34.0
0°-40°	2426.7	57.0
0°-60°	3805.6	89.4
0°-90°	4244.4	99.7
90°-120°	11.6	0.3
90°-150°	12.4	0.3
90°-180°	13.0	0.3
0°-180°	4257.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1789	1789	1789	1789	1789	
5°	1762	1767	1780	1808	1810	166
15°	1572	1623	1734	1875	1932	442
25°	1293	1414	1676	1982	2149	596
35°	981	1162	1613	1965	2127	609
45°	637	918	1380	1430	1404	493
55°	349	625	672	377	309	322
65°	229	300	265	216	160	226
75°	123	136	145	129	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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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1789.3	1789.3	1789.3	1789.3	1789.3
2.5°	1799.8	1795.9	1783.1	1794.7	1793.8
5°	1762.2	1766.7	1780.4	1807.8	1809.6
7.5°	1745.5	1757.7	1765.5	1824.9	1832.6
10°	1681.9	1701.0	1770.8	1832.6	1860.1
12.5°	1634.1	1672.6	1740.4	1845.2	1892.9
15°	1572.1	1623.4	1733.5	1874.7	1931.7
17.5°	1519.2	1571.8	1712.6	1897.1	1976.8
20°	1439.5	1534.7	1695.6	1920.4	2028.4
22.5°	1382.5	1478.9	1682.5	1941.0	2089.6
25°	1292.7	1414.2	1675.6	1982.5	2148.7
27.5°	1217.5	1359.5	1660.4	2009.0	2187.8
30°	1142.0	1292.7	1651.7	2013.8	2202.4
32.5°	1050.9	1238.4	1630.0	2002.7	2181.5
35°	981.4	1162.5	1612.9	1964.8	2126.9
37.5°	896.6	1102.9	1575.6	1896.2	2037.4
40°	809.2	1047.6	1536.8	1789.0	1897.7
42.5°	720.8	985.6	1474.8	1646.1	1679.2
45°	636.6	917.8	1379.8	1430.0	1404.3
47.5°	561.1	845.0	1267.6	1159.0	1098.7
50°	479.6	771.0	1115.4	882.3	724.4
52.5°	406.2	709.2	905.9	597.5	450.7
55°	348.6	625.0	672.5	376.7	309.2
57.5°	307.7	560.5	485.3	297.9	264.7
60°	280.6	479.9	340.9	273.4	232.8
62.5°	253.7	379.7	291.6	249.2	195.8
65°	228.6	299.7	265.0	216.1	160.0
67.5°	202.7	243.3	239.4	196.1	133.4
70°	174.6	200.0	210.4	164.2	92.5
72.5°	149.5	167.7	179.1	140.3	78.5
75°	123.0	136.4	145.4	129.2	68.1
77.5°	97.6	109.8	118.5	117.0	59.7
80°	75.2	83.3	95.8	104.8	50.1
82.5°	51.3	57.3	75.5	90.4	39.1
85°	29.0	37.9	57.6	75.8	27.8
87.5°	8.4	22.4	41.8	60.9	16.1
90°	0.0	10.7	28.4	46.0	6.0
92.5°	0.0	4.2	18.5	32.2	4.2
95°	0.0	1.2	10.7	21.2	2.7
97.5°	0.0	0.3	5.1	12.5	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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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)