

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: P685479

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685479
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-W-L835-CD-U
Description: METALUX CRUZE LINEAR 4FT WIDE LENS MODEL @80 CRI and 3500K
Light Source: (392) 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

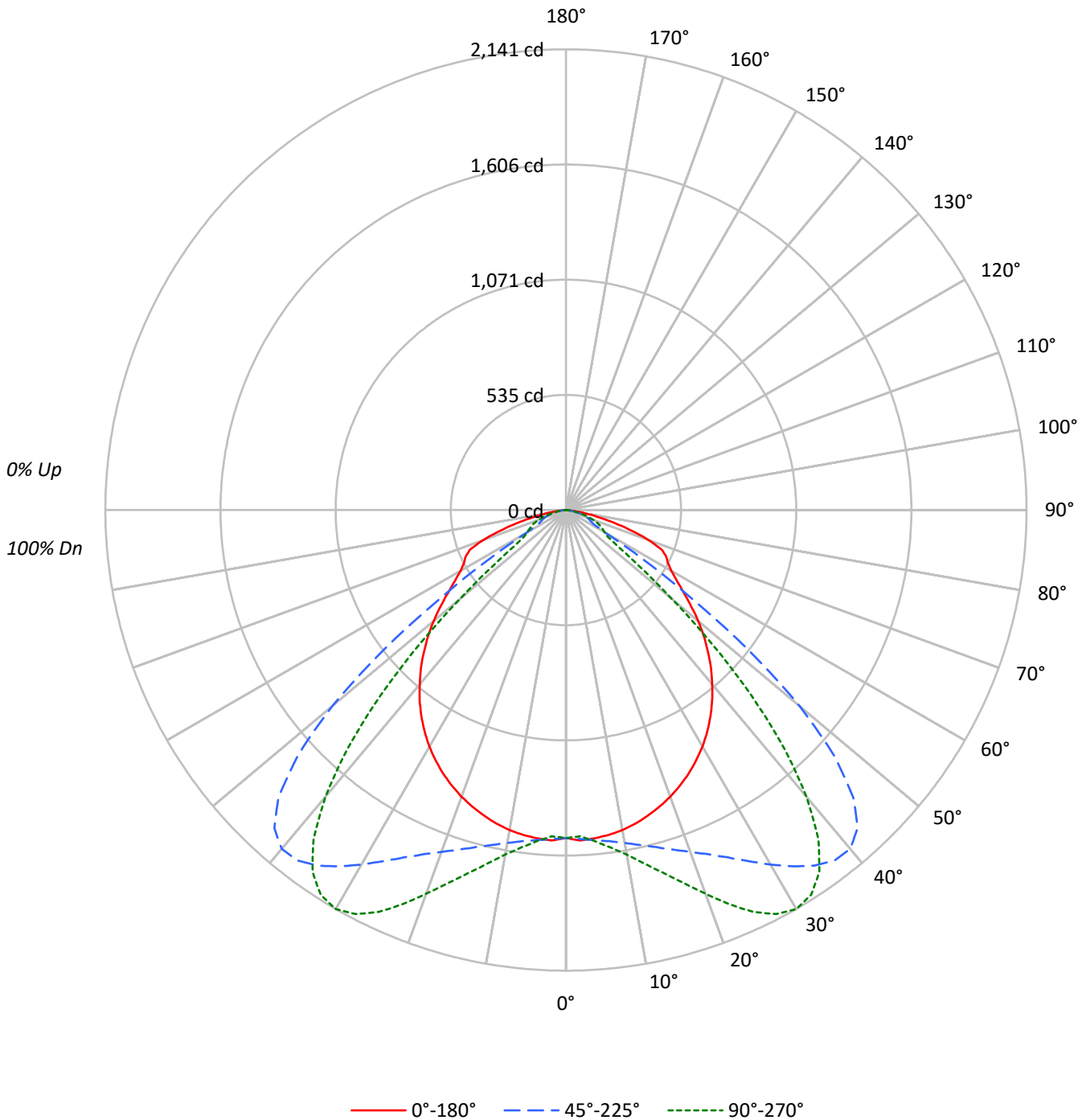
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4873.9 lumens
Efficiency: N/A
Efficacy: 157.2 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.69 / 1.65
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				
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	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	89	89	89	87
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	77	77	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	67	67	67	65
4	86	75	67	61	84	73	66	60	71	65	59	69	63	59	67	62	58	58	58	58	56
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	51	51	51	51	49
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	45	45	45	43
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	39	39	39	38
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	35	35	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	32	32	32	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	29	29	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4921	4921	4921
5°	4964	4990	5005
10°	4952	5150	5331
15°	4916	5423	5835
20°	4873	5809	6519
25°	4814	6348	7342
30°	4732	7093	7984
35°	4616	7950	8094
40°	4456	8662	7333
45°	4264	8629	5566
50°	4033	7131	3208
55°	3759	3923	1650
60°	3648	1369	1345
65°	3931	996	1349
70°	3882	1021	1301
75°	2936	892	1044
80°	1774	729	738
85°	882	374	156



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.5	3.0
10°-20°	458.6	9.4
20°-30°	805.7	16.5
30°-40°	1119.3	23.0
40°-50°	1135.1	23.3
50°-60°	728.4	14.9
60°-70°	340.7	7.0
70°-80°	118.1	2.4
80°-90°	20.6	0.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1411.8	29.0
0°-40°	2531.0	51.9
0°-60°	4394.5	90.2
0°-90°	4873.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4873.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1524	1524	1524	1524	1524	
5°	1531	1520	1539	1544	1544	145
15°	1470	1505	1622	1709	1745	415
25°	1351	1490	1782	1990	2061	622
35°	1171	1502	2017	2086	2053	731
45°	934	1608	1890	1409	1219	720
55°	668	1661	697	335	293	603
65°	514	531	130	163	176	501
75°	235	81	72	82	84	255
85°	24	21	10	6	4	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1523.9	1523.9	1523.9	1523.9	1523.9	1523.9	1523.9	1523.9	1523.9	1523.9	1523.9
2.5°	1537.2	1532.4	1524.5	1521.3	1522.9	1530.8	1533.5	1527.6	1526.1	1521.8	1517.6
5°	1531.4	1527.1	1521.3	1520.2	1526.1	1539.3	1545.1	1543.5	1546.2	1546.7	1544.1
7.5°	1522.9	1519.2	1514.4	1519.2	1531.4	1552.5	1565.8	1570.0	1579.6	1581.7	1581.2
10°	1510.2	1507.0	1505.4	1517.6	1538.8	1570.6	1593.9	1605.5	1619.3	1624.1	1625.7
12.5°	1493.2	1490.0	1494.3	1515.5	1548.8	1594.4	1628.9	1649.5	1669.1	1679.2	1682.4
15°	1470.4	1469.4	1480.0	1513.9	1561.6	1622.0	1669.7	1702.0	1730.1	1741.2	1745.4
17.5°	1445.5	1446.0	1465.1	1513.3	1576.9	1654.3	1715.2	1761.3	1795.8	1811.7	1816.4
20°	1418.0	1419.5	1448.2	1512.8	1596.0	1690.3	1765.6	1826.0	1868.9	1890.1	1897.0
22.5°	1385.6	1388.8	1429.6	1513.3	1616.1	1731.6	1824.9	1897.0	1948.4	1973.8	1982.3
25°	1351.2	1356.0	1410.5	1516.0	1641.6	1781.5	1892.7	1977.0	2028.9	2051.2	2060.7
27.5°	1311.5	1319.4	1389.9	1519.7	1671.8	1839.2	1962.1	2043.2	2091.4	2108.4	2116.9
30°	1269.1	1278.1	1369.7	1527.1	1711.0	1902.3	2026.3	2094.6	2126.9	2136.5	2141.2
32.5°	1222.4	1237.3	1349.6	1539.3	1757.1	1963.2	2073.4	2114.2	2122.2	2119.0	2120.6
35°	1171.0	1186.9	1330.5	1559.4	1809.5	2016.7	2092.0	2092.0	2068.7	2054.3	2053.3
37.5°	1116.5	1136.6	1311.5	1582.8	1870.5	2052.2	2071.8	2019.4	1962.7	1931.9	1927.2
40°	1057.1	1084.1	1298.2	1614.5	1925.6	2054.9	1999.8	1891.7	1795.2	1745.4	1739.6
42.5°	998.3	1031.7	1292.4	1655.9	1966.9	2006.1	1864.1	1697.2	1566.3	1507.5	1501.2
45°	933.6	977.6	1294.5	1712.6	1978.0	1889.6	1662.2	1446.0	1299.3	1225.1	1218.7
47.5°	869.5	924.1	1299.8	1776.7	1929.3	1691.9	1393.6	1143.5	997.8	919.9	918.8
50°	802.8	873.8	1312.5	1829.1	1797.4	1419.5	1063.5	819.2	702.6	643.3	638.5
52.5°	733.4	829.8	1340.1	1838.7	1562.6	1069.8	721.7	546.8	471.1	433.4	426.0
55°	667.6	792.7	1385.1	1752.8	1225.1	696.8	454.6	345.0	306.8	291.4	293.0
57.5°	611.0	765.1	1437.6	1528.7	795.4	410.1	263.4	229.4	228.4	230.0	230.5
60°	564.9	748.2	1460.9	1146.7	436.6	212.0	183.9	191.3	201.4	207.2	208.2
62.5°	534.6	739.2	1389.9	664.5	193.9	147.8	160.6	174.3	186.0	191.3	191.8
65°	514.5	715.3	1137.1	328.5	118.7	130.4	146.2	160.6	171.2	175.4	176.5
67.5°	483.3	648.0	779.5	136.2	104.4	117.6	133.0	146.8	155.8	159.0	159.5
70°	411.2	542.6	453.0	90.6	94.3	108.1	120.3	130.9	136.7	138.3	137.8
72.5°	321.1	429.7	228.9	82.1	87.4	94.8	101.7	107.6	110.7	112.3	112.3
75°	235.3	314.2	107.6	72.6	65.2	71.5	78.4	82.1	83.2	83.7	83.7
77.5°	157.9	216.7	64.1	56.2	50.3	55.6	58.3	56.7	55.6	56.7	56.7
80°	95.4	133.5	56.2	40.8	38.7	39.2	37.1	37.1	39.2	40.3	39.7
82.5°	51.4	75.8	49.3	29.7	26.0	23.8	23.3	22.3	21.2	20.7	20.7
85°	23.8	38.7	31.8	18.0	13.8	10.1	7.9	5.8	5.3	4.2	4.2
87.5°	9.5	14.8	9.5	5.8	3.2	2.1	1.6	1.1	0.5	0.5	0.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)