

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: P685469

Luminaire Tested: **4CZL-5-UNV-M-L950-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685469
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-M-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT MEDIUM LENS MODEL @90 CRI and 5000K
Light Source: (392) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

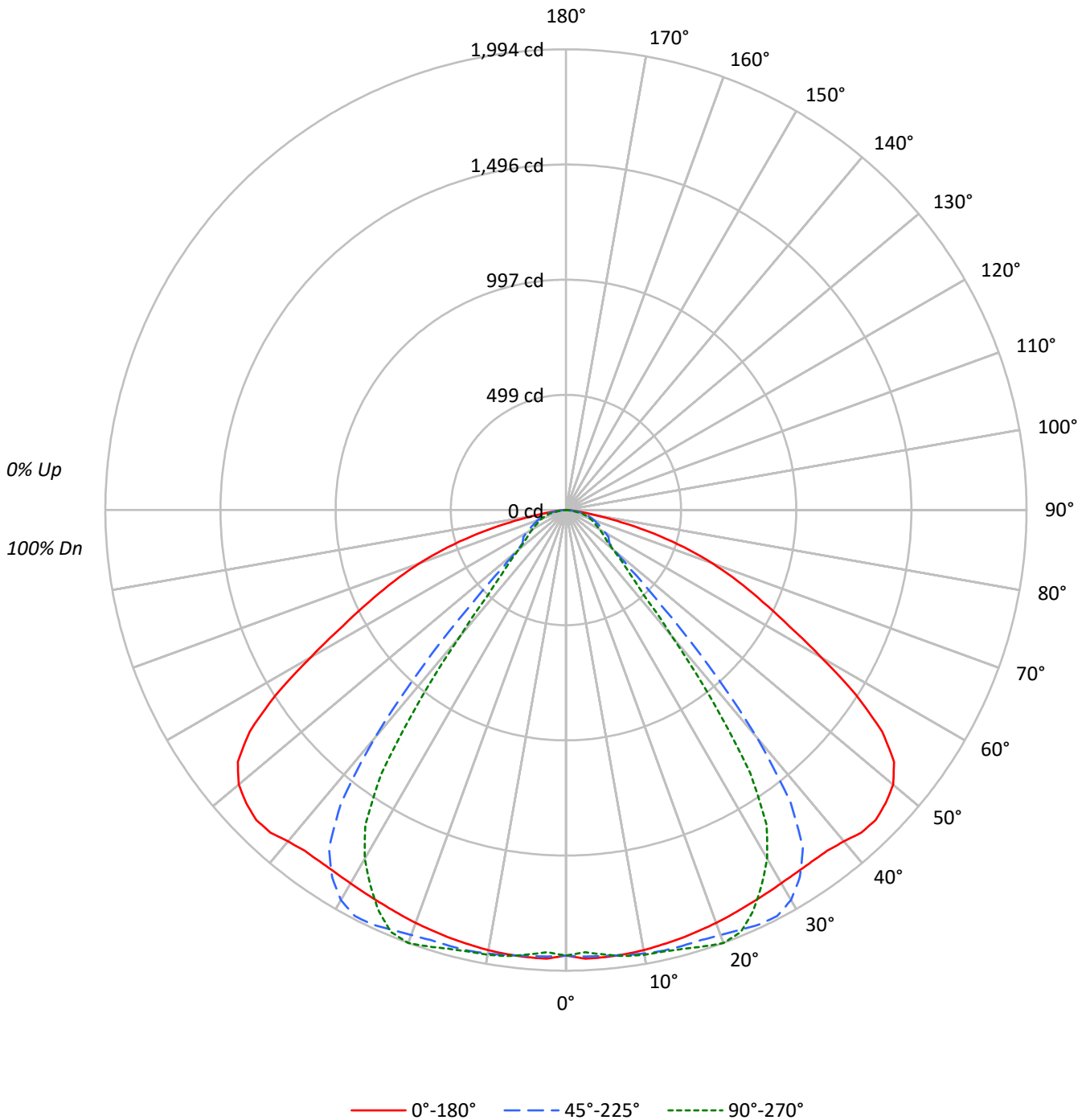
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4165.9 lumens
Efficiency: N/A
Efficacy: 134.4 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 1.28 / 1.22
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	90	88
2	103	96	90	86	100	94	89	85	91	87	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	79	73	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	51	61	55	50	59	54	50	50	50	50	48
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	37	36
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	34	34	34	33

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6227	6227	6227
5°	6296	6279	6261
10°	6342	6391	6409
15°	6417	6527	6573
20°	6535	6727	6854
25°	6703	7054	6828
30°	6955	7267	6495
35°	7320	7049	5485
40°	7890	5436	3000
45°	8662	2672	1793
50°	9288	1397	1337
55°	9406	1275	1154
60°	8249	1271	1088
65°	7179	1221	1054
70°	6370	1237	1060
75°	4887	1270	1077
80°	2488	1291	891
85°	982	726	252



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	184.8	4.4
10°-20°	550.7	13.2
20°-30°	888.7	21.3
30°-40°	1040.8	25.0
40°-50°	708.5	17.0
50°-60°	410.3	9.8
60°-70°	234.6	5.6
70°-80°	120.7	2.9
80°-90°	26.9	0.6
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°	1624.1	39.0
0°-40°	2664.9	64.0
0°-60°	3783.7	90.8
0°-90°	4165.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4165.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1928	1928	1928	1928	1928	
5°	1942	1923	1937	1935	1931	185
15°	1920	1917	1952	1957	1966	543
25°	1881	1908	1980	1949	1916	871
35°	1857	1949	1788	1508	1391	1169
45°	1897	1411	585	394	393	1457
55°	1671	484	226	211	205	1456
65°	940	173	160	141	138	942
75°	392	107	102	89	86	416
85°	26	32	20	9	7	45
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°	1928.2	1928.2	1928.2	1928.2	1928.2	1928.2	1928.2	1928.2	1928.2	1928.2	1928.2
2.5°	1943.8	1938.3	1927.3	1922.8	1922.8	1934.6	1936.5	1929.2	1927.8	1921.4	1915.5
5°	1942.4	1936.9	1926.4	1922.3	1923.7	1936.9	1940.1	1934.2	1936.0	1934.2	1931.4
7.5°	1939.7	1933.7	1924.1	1921.4	1925.5	1942.4	1947.9	1944.7	1948.8	1947.9	1947.0
10°	1934.2	1929.6	1920.5	1920.0	1928.2	1949.2	1956.1	1952.0	1953.4	1952.9	1954.7
12.5°	1926.9	1922.8	1915.0	1919.1	1931.0	1953.4	1957.9	1951.5	1953.4	1953.8	1957.0
15°	1919.6	1914.5	1909.5	1919.1	1931.4	1952.4	1957.0	1956.1	1961.6	1962.0	1966.1
17.5°	1910.4	1907.2	1905.9	1918.7	1928.2	1951.5	1962.0	1967.5	1974.8	1976.6	1980.7
20°	1901.8	1899.0	1902.2	1916.4	1926.9	1957.5	1972.1	1980.3	1988.0	1990.3	1994.4
22.5°	1891.3	1889.4	1898.1	1913.2	1929.2	1966.6	1983.0	1983.9	1980.7	1974.8	1977.5
25°	1881.2	1881.2	1894.0	1912.3	1936.0	1979.8	1981.2	1955.2	1931.9	1916.4	1916.4
27.5°	1873.0	1874.8	1890.8	1916.4	1949.2	1980.7	1942.9	1891.3	1857.0	1834.7	1833.3
30°	1865.2	1868.4	1890.8	1927.8	1958.8	1948.8	1875.3	1812.7	1765.3	1743.8	1742.0
32.5°	1859.8	1864.8	1899.0	1945.1	1947.4	1884.4	1788.6	1709.6	1653.4	1621.5	1616.0
35°	1857.0	1863.0	1914.5	1960.2	1901.3	1788.1	1652.1	1530.2	1441.2	1400.1	1391.4
37.5°	1858.9	1869.4	1936.0	1947.4	1785.8	1598.7	1403.3	1228.4	1106.1	1067.3	1040.4
40°	1871.6	1889.4	1952.9	1843.3	1543.4	1289.6	1030.8	842.7	758.2	730.4	711.7
42.5°	1893.1	1910.9	1908.6	1605.0	1205.6	916.2	664.2	551.4	510.4	505.8	497.1
45°	1896.7	1903.6	1765.3	1293.3	876.9	585.2	427.7	394.4	393.5	396.7	392.6
47.5°	1877.6	1864.3	1558.5	989.2	603.9	378.4	321.8	327.3	330.0	327.8	324.6
50°	1848.8	1800.0	1326.6	727.2	402.6	278.0	280.7	285.8	276.2	269.8	266.1
52.5°	1790.4	1695.4	1069.1	515.4	278.5	237.4	259.3	244.7	231.0	227.3	226.9
55°	1670.8	1540.2	822.6	371.6	212.7	226.4	230.5	211.8	207.7	205.9	205.0
57.5°	1488.6	1347.1	618.6	268.4	186.7	218.7	200.4	193.1	189.0	187.6	186.3
60°	1277.3	1131.2	461.1	197.2	181.2	196.8	181.7	174.8	170.3	168.4	168.4
62.5°	1090.1	936.3	341.0	160.2	179.9	177.6	163.9	156.6	153.8	152.9	152.0
65°	939.5	753.2	246.1	148.4	168.0	159.8	146.5	141.5	139.7	137.9	137.9
67.5°	805.3	589.8	181.2	145.6	154.3	143.8	133.8	129.6	127.4	126.9	126.4
70°	674.7	434.6	137.9	142.4	146.5	131.0	121.4	116.4	113.7	112.3	112.3
72.5°	537.3	298.1	110.0	131.0	134.2	116.0	106.4	102.7	100.4	99.1	98.6
75°	391.7	187.2	96.8	110.0	115.5	101.8	92.2	89.0	88.1	86.7	86.3
77.5°	249.2	111.8	82.6	89.9	94.5	85.8	78.5	74.4	74.0	72.6	72.1
80°	133.8	71.7	66.2	70.8	73.5	69.4	60.7	52.5	50.2	48.4	47.9
82.5°	62.1	45.6	49.3	53.4	54.8	44.3	36.5	32.9	30.6	28.3	26.9
85°	26.5	24.7	30.6	32.9	26.9	19.6	12.8	9.6	7.8	7.3	6.8
87.5°	9.6	9.6	11.4	7.8	4.6	3.7	3.7	3.2	2.7	2.3	2.3
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)