

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: P685489

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685489
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-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT WIDE LENS MODEL @80 CRI and 4000K
Light Source: (392) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

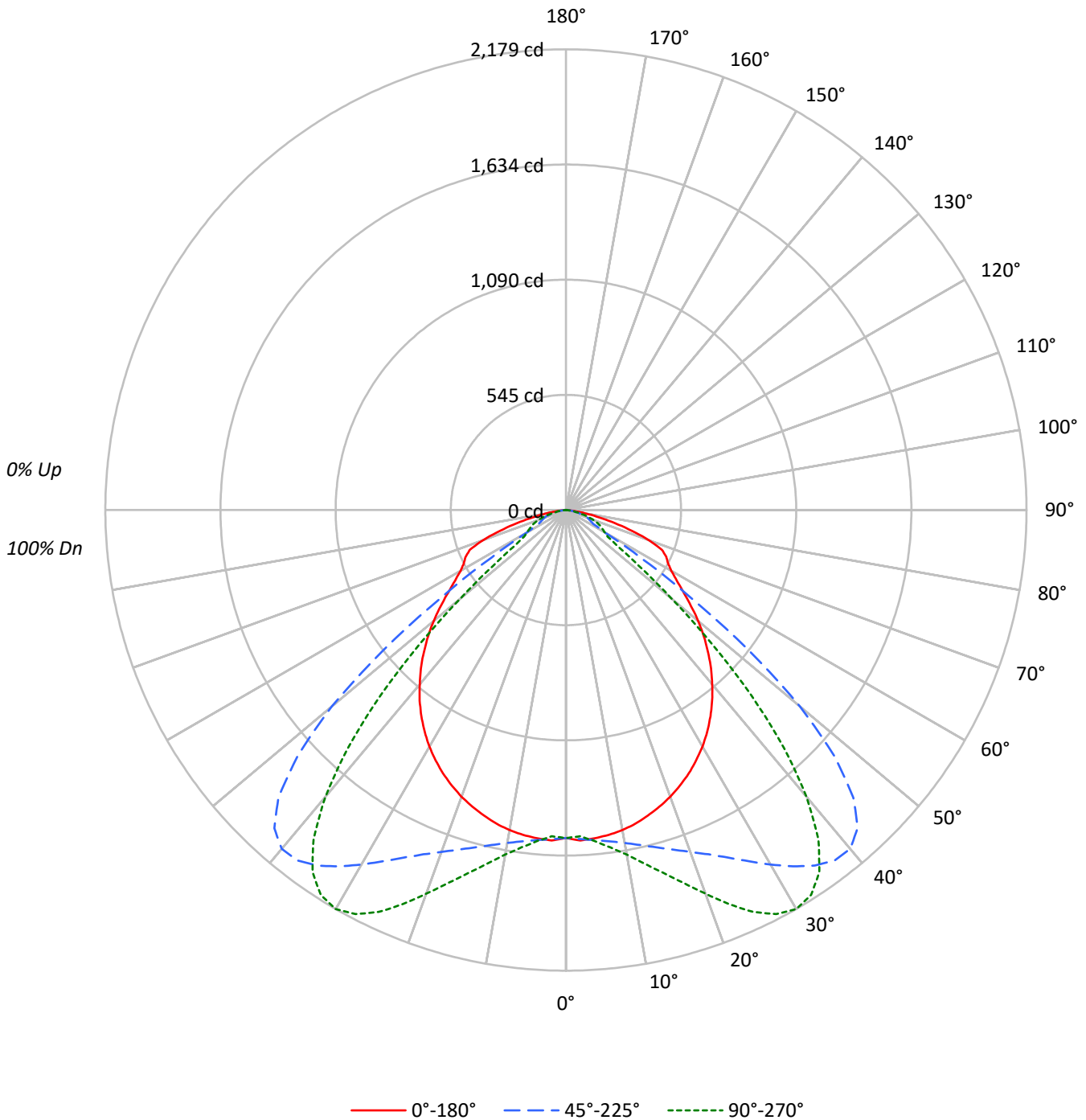
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4960.7 lumens
Efficiency: N/A
Efficacy: 160.0 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				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°	5009	5009	5009
5°	5052	5078	5094
10°	5040	5241	5425
15°	5003	5519	5939
20°	4959	5912	6635
25°	4900	6460	7473
30°	4816	7220	8126
35°	4699	8092	8239
40°	4535	8817	7464
45°	4340	8783	5665
50°	4105	7258	3265
55°	3826	3993	1679
60°	3713	1393	1369
65°	4002	1014	1372
70°	3951	1039	1324
75°	2988	908	1063
80°	1806	742	751
85°	900	378	159



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.1	3.0
10°-20°	466.8	9.4
20°-30°	820.0	16.5
30°-40°	1139.2	23.0
40°-50°	1155.3	23.3
50°-60°	741.4	14.9
60°-70°	346.8	7.0
70°-80°	120.2	2.4
80°-90°	21.0	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°	1436.9	29.0
0°-40°	2576.1	51.9
0°-60°	4472.8	90.2
0°-90°	4960.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4960.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1551	1551	1551	1551	1551	
5°	1559	1548	1567	1572	1572	148
15°	1497	1532	1651	1739	1776	422
25°	1375	1516	1813	2025	2097	633
35°	1192	1529	2053	2123	2090	744
45°	950	1637	1923	1434	1240	733
55°	680	1691	709	341	298	613
65°	524	540	133	166	180	509
75°	240	83	73	84	85	259
85°	24	22	10	6	4	37
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°	1551.1	1551.1	1551.1	1551.1	1551.1	1551.1	1551.1	1551.1	1551.1	1551.1	1551.1
2.5°	1564.6	1559.7	1551.6	1548.4	1550.0	1558.1	1560.8	1554.9	1553.2	1548.9	1544.6
5°	1558.6	1554.3	1548.4	1547.3	1553.2	1566.7	1572.7	1571.0	1573.7	1574.3	1571.6
7.5°	1550.0	1546.2	1541.4	1546.2	1558.6	1580.2	1593.7	1598.0	1607.7	1609.9	1609.3
10°	1537.1	1533.8	1532.2	1544.6	1566.2	1598.5	1622.3	1634.1	1648.2	1653.0	1654.6
12.5°	1519.8	1516.6	1520.9	1542.5	1576.4	1622.8	1657.9	1678.9	1698.9	1709.1	1712.3
15°	1496.6	1495.5	1506.3	1540.8	1589.4	1650.9	1699.4	1732.3	1760.9	1772.2	1776.5
17.5°	1471.3	1471.8	1491.2	1540.3	1605.0	1683.8	1745.8	1792.7	1827.8	1843.9	1848.8
20°	1443.2	1444.8	1474.0	1539.8	1624.4	1720.4	1797.0	1858.5	1902.2	1923.7	1930.8
22.5°	1410.3	1413.6	1455.1	1540.3	1644.9	1762.5	1857.4	1930.8	1983.1	2009.0	2017.6
25°	1375.3	1380.1	1435.7	1543.0	1670.8	1813.2	1926.4	2012.2	2065.1	2087.7	2097.4
27.5°	1334.8	1342.9	1414.6	1546.8	1701.5	1872.0	1997.1	2079.6	2128.7	2145.9	2154.6
30°	1291.7	1300.8	1394.1	1554.3	1741.5	1936.2	2062.4	2131.9	2164.8	2174.5	2179.4
32.5°	1244.2	1259.3	1373.6	1566.7	1788.4	1998.2	2110.4	2151.9	2160.0	2156.7	2158.4
35°	1191.9	1208.1	1354.2	1587.2	1841.8	2052.6	2129.2	2129.2	2105.5	2090.9	2089.9
37.5°	1136.3	1156.8	1334.8	1610.9	1903.8	2088.8	2108.7	2055.3	1997.6	1966.4	1961.5
40°	1075.9	1103.4	1321.3	1643.3	1959.9	2091.5	2035.4	1925.4	1827.2	1776.5	1770.6
42.5°	1016.1	1050.1	1315.4	1685.4	2002.0	2041.9	1897.3	1727.4	1594.2	1534.4	1527.9
45°	950.3	995.0	1317.6	1743.1	2013.3	1923.2	1691.8	1471.8	1322.4	1246.9	1240.4
47.5°	885.0	940.6	1322.9	1808.3	1963.7	1722.0	1418.4	1163.8	1015.5	936.3	935.2
50°	817.1	889.3	1335.9	1861.7	1829.4	1444.8	1082.4	833.8	715.1	654.7	649.9
52.5°	746.4	844.6	1363.9	1871.4	1590.5	1088.9	734.6	556.6	479.5	441.2	433.6
55°	679.5	806.8	1409.8	1784.1	1246.9	709.2	462.7	351.1	312.3	296.6	298.2
57.5°	621.8	778.8	1463.2	1555.9	809.5	417.4	268.0	233.5	232.4	234.1	234.6
60°	574.9	761.5	1486.9	1167.1	444.4	215.7	187.1	194.7	204.9	210.9	212.0
62.5°	544.2	752.3	1414.6	676.3	197.4	150.5	163.4	177.4	189.3	194.7	195.2
65°	523.7	728.1	1157.4	334.4	120.8	132.7	148.9	163.4	174.2	178.5	179.6
67.5°	491.9	659.6	793.3	138.6	106.2	119.7	135.4	149.4	158.6	161.8	162.3
70°	418.5	552.3	461.1	92.2	96.0	110.0	122.4	133.2	139.1	140.8	140.2
72.5°	326.8	437.4	233.0	83.6	89.0	96.5	103.5	109.5	112.7	114.3	114.3
75°	239.5	319.8	109.5	73.9	66.3	72.8	79.8	83.6	84.7	85.2	85.2
77.5°	160.7	220.6	65.3	57.2	51.2	56.6	59.3	57.7	56.6	57.7	57.7
80°	97.1	135.9	57.2	41.5	39.4	39.9	37.8	37.8	39.9	41.0	40.4
82.5°	52.3	77.1	50.2	30.2	26.4	24.3	23.7	22.7	21.6	21.0	21.0
85°	24.3	39.4	32.4	18.3	14.0	10.2	8.1	5.9	5.4	4.3	4.3
87.5°	9.7	15.1	9.7	5.9	3.2	2.2	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)