

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: P685651

Luminaire Tested: **4CZL-9-UNV-FUL-L950-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685651
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-FUL-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT FROSTED LENS MODEL WITH UPLIGHT @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

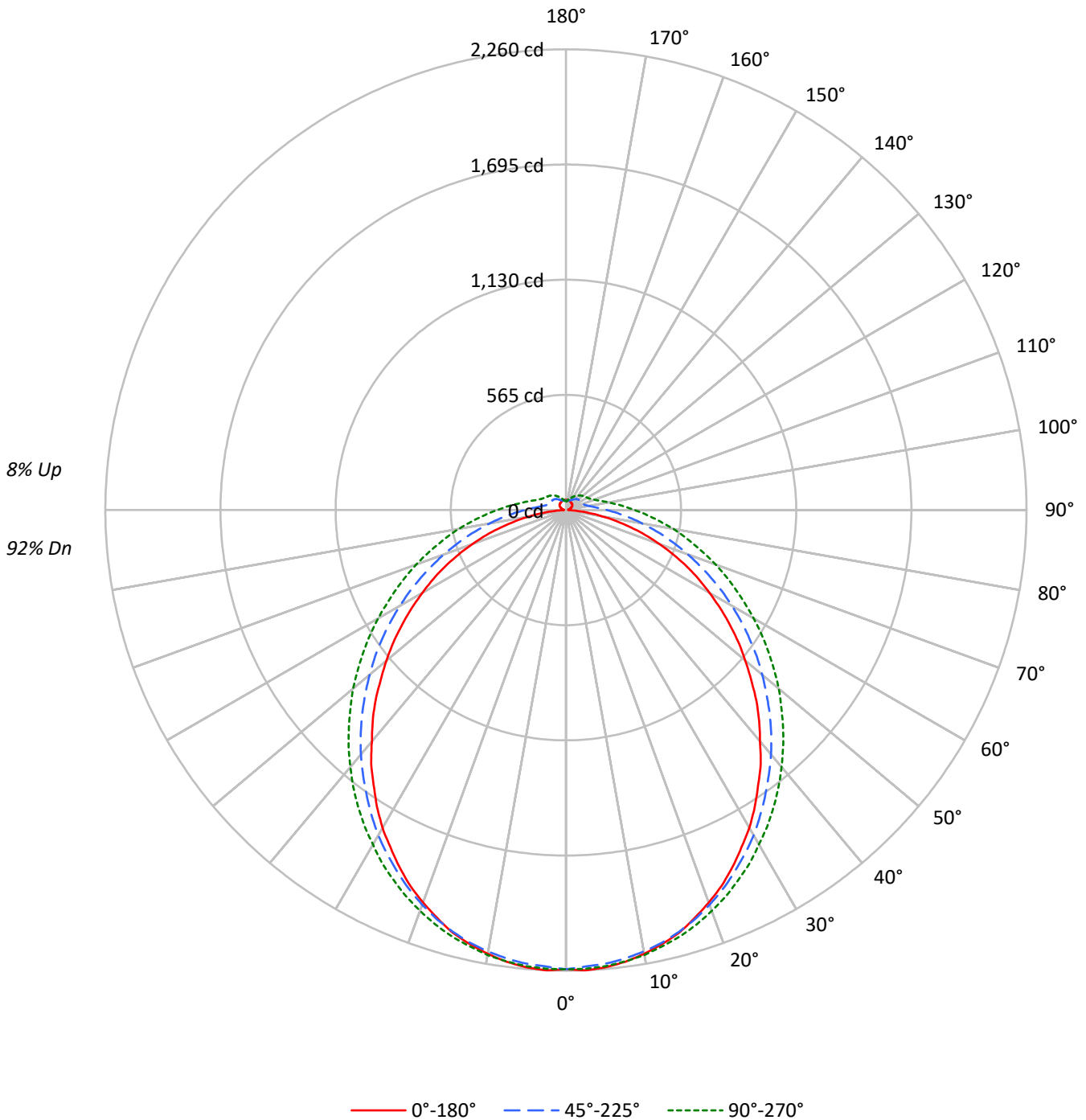
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7028.3 lumens
Efficiency: N/A
Efficacy: 130.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.25 / 1.34
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 4' x H: 0.17')
CIE Type: Direct

Input Watts (W): 54
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				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	117	117	117	117	113	113	113	113	107	107	107	100	100	100	95	95	95	95	95	95	92
1	106	101	96	92	102	98	93	90	92	88	85	87	84	81	82	79	77	77	77	77	75
2	96	87	80	74	93	85	78	73	80	74	70	75	71	67	71	68	64	64	64	64	62
3	87	77	68	61	84	74	67	60	70	64	58	66	61	56	63	58	54	54	54	54	52
4	80	68	59	52	77	66	58	51	62	55	50	59	53	48	56	51	47	47	47	47	44
5	74	61	51	45	71	59	50	44	56	49	43	53	47	42	50	45	41	41	41	41	38
6	68	54	45	39	65	53	45	38	50	43	38	48	42	37	46	40	36	36	36	36	33
7	63	49	41	34	61	48	40	34	46	39	33	44	37	32	42	36	32	32	32	32	30
8	59	45	37	31	57	44	36	30	42	35	30	40	34	29	38	33	28	28	28	28	26
9	55	41	33	28	53	40	33	27	39	32	27	37	31	26	35	30	26	26	26	26	24
10	51	38	30	25	50	37	30	25	36	29	24	34	28	24	33	27	23	23	23	23	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7275	7275	7275
5°	7272	7135	7154
10°	7195	7000	7021
15°	7099	6848	6871
20°	6937	6667	6704
25°	6756	6461	6525
30°	6555	6253	6332
35°	6301	6006	6145
40°	6033	5771	5941
45°	5791	5513	5732
50°	5501	5249	5531
55°	5216	4976	5310
60°	4898	4687	5103
65°	4582	4388	4909
70°	4130	4095	4762
75°	3571	3820	4632
80°	2780	3601	4664
85°	1621	3497	4803



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	213.1	3.0
10°-20°	606.3	8.6
20°-30°	905.4	12.9
30°-40°	1070.3	15.2
40°-50°	1090.7	15.5
50°-60°	983.4	14.0
60°-70°	778.1	11.1
70°-80°	525.9	7.5
80°-90°	294.1	4.2
90°-100°	160.0	2.3
100°-110°	105.0	1.5
110°-120°	83.2	1.2
120°-130°	70.8	1.0
130°-140°	56.7	0.8
140°-150°	40.5	0.6
150°-160°	26.1	0.4
160°-170°	14.1	0.2
170°-180°	4.4	0.1
0°-30°	1724.8	24.5
0°-40°	2795.1	39.8
0°-60°	4869.3	69.3
0°-90°	6467.4	92.0
90°-120°	348.2	5.0
90°-150°	516.3	7.3
90°-180°	561.0	8.0
0°-180°	7028.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2253	2253	2253	2253	2253	
5°	2252	2248	2234	2247	2246	214
15°	2147	2144	2142	2161	2165	604
25°	1933	1942	1958	1994	2002	890
35°	1645	1668	1706	1760	1777	1030
45°	1321	1347	1414	1480	1506	1017
55°	982	1018	1100	1183	1212	878
65°	653	686	785	881	918	645
75°	331	376	502	613	648	351
85°	65	145	279	387	426	79
90°	10	80	201	300	337	8
95°	11	52	147	235	268	9
105°	18	46	96	152	174	19
115°	29	50	86	118	131	29
125°	38	52	82	106	114	34
135°	42	51	76	94	101	33
145°	44	49	64	80	85	28
155°	47	48	53	66	68	22
165°	49	48	47	50	54	14
175°	50	49	47	41	42	5
180°	46	46	46	46	46	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2252.9	2252.9	2252.9	2252.9	2252.9
2.5°	2260.2	2256.6	2241.6	2253.4	2252.9
5°	2251.6	2248.0	2234.0	2246.6	2245.7
7.5°	2234.9	2232.6	2219.5	2233.5	2233.1
10°	2210.5	2210.5	2199.2	2215.4	2216.8
12.5°	2181.1	2180.7	2174.8	2191.5	2191.5
15°	2147.2	2144.5	2142.3	2160.8	2165.3
17.5°	2098.9	2100.7	2104.8	2126.9	2131.4
20°	2049.2	2053.3	2060.9	2087.1	2093.0
22.5°	1995.9	2000.4	2012.6	2041.1	2050.6
25°	1933.1	1942.1	1957.9	1994.5	2002.2
27.5°	1865.3	1881.1	1901.5	1940.3	1953.4
30°	1800.3	1812.9	1842.3	1882.9	1894.2
32.5°	1725.3	1740.6	1775.0	1823.8	1839.1
35°	1644.9	1667.5	1705.9	1760.1	1777.2
37.5°	1569.9	1587.9	1635.4	1693.2	1713.5
40°	1481.3	1510.7	1565.4	1622.3	1645.8
42.5°	1403.6	1428.9	1490.4	1553.2	1577.6
45°	1321.0	1347.2	1413.6	1479.5	1506.2
47.5°	1232.4	1263.6	1334.5	1408.1	1433.0
50°	1149.3	1181.8	1257.7	1332.2	1363.4
52.5°	1067.5	1101.4	1180.0	1258.6	1287.5
55°	981.7	1018.3	1099.6	1182.7	1212.5
57.5°	897.7	934.2	1021.0	1106.8	1138.9
60°	813.2	847.5	940.6	1028.7	1063.9
62.5°	734.1	767.5	863.3	958.2	988.9
65°	653.2	686.2	784.7	881.4	918.0
67.5°	569.7	609.4	708.4	809.6	848.4
70°	487.5	528.1	637.4	742.7	781.6
72.5°	409.7	455.8	566.1	673.6	713.3
75°	330.7	376.3	501.5	612.6	648.3
77.5°	256.1	309.5	438.2	550.2	592.3
80°	184.8	245.3	381.3	491.1	535.3
82.5°	121.5	190.6	328.4	437.3	477.1
85°	64.6	145.0	278.7	387.2	426.0
87.5°	25.3	107.5	237.2	341.5	380.4
90°	9.9	80.0	200.6	299.5	336.6
92.5°	9.9	62.3	170.8	265.6	300.4
95°	10.8	52.4	147.3	235.4	268.3
97.5°	11.7	47.4	128.8	208.7	238.1
100°	13.6	45.6	114.7	187.0	213.7
102.5°	15.8	45.6	103.5	167.2	192.5
105°	18.5	46.5	96.2	151.8	174.4
107.5°	20.8	47.4	91.3	139.1	159.5
110°	23.5	48.8	88.5	129.7	147.3

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	26.2	49.7	86.7	122.9	138.2
115°	28.9	50.1	85.8	117.5	130.6
117.5°	31.6	51.0	84.9	113.8	125.1
120°	34.3	51.5	84.0	111.1	121.1
122.5°	36.6	51.5	83.1	108.4	117.5
125°	38.4	52.0	81.8	105.7	114.3
127.5°	39.8	52.4	80.9	103.0	110.7
130°	41.1	52.0	79.5	100.3	107.5
132.5°	42.0	51.5	77.7	97.6	104.4
135°	42.5	51.0	75.9	94.4	100.7
137.5°	42.9	50.6	73.2	91.3	97.1
140°	42.9	50.1	70.0	87.6	93.1
142.5°	43.4	49.2	66.9	84.0	89.0
145°	44.3	48.8	63.7	80.4	84.9
147.5°	45.2	47.9	61.0	76.3	80.4
150°	46.1	47.9	58.3	72.7	76.3
152.5°	46.5	47.9	55.6	69.6	72.3
155°	47.4	47.9	52.9	66.4	68.2
157.5°	47.9	47.9	51.0	62.3	64.2
160°	48.3	48.3	49.2	57.8	60.5
162.5°	49.2	48.3	48.3	53.3	56.9
165°	49.2	48.3	47.4	49.7	53.8
167.5°	49.7	48.8	47.0	47.0	51.0
170°	49.7	48.8	47.0	44.7	47.0
172.5°	49.7	48.8	47.0	42.9	43.8
175°	49.7	48.8	47.0	41.1	41.6
177.5°	49.7	48.8	46.5	39.8	41.6
180°	46.1	46.1	46.1	46.1	46.1

(END OF REPORT)