

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: P685641

Luminaire Tested: **4CZL-9-UNV-FUL-L940-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685641
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-L940-CD-U
Description: METALUX CRUZE LINEAR 4FT FROSTED LENS MODEL WITH UPLIGHT @90 CRI
and 4000K
Light Source: (588) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

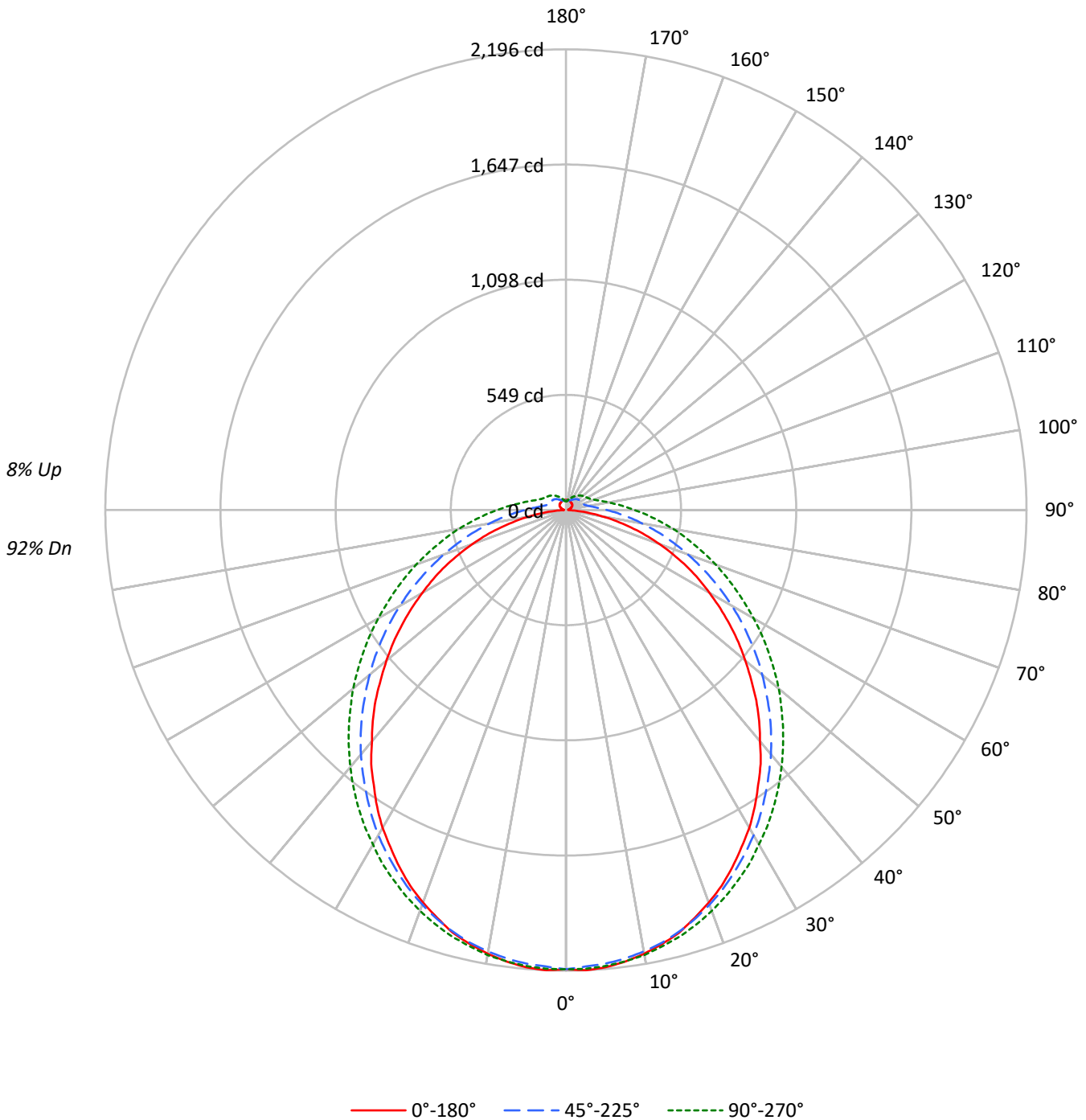
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6828.3 lumens
Efficiency: N/A
Efficacy: 126.4 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

TEST NUMBER: P685641
CATALOG NUMBER: 4CZL-9-UNV-FUL-L940-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P685641

CATALOG NUMBER: 4CZL-9-UNV-FUL-L940-CD-U

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°	7068	7068	7068
5°	7065	6932	6951
10°	6990	6801	6821
15°	6897	6653	6675
20°	6739	6478	6513
25°	6564	6277	6340
30°	6368	6074	6152
35°	6121	5835	5970
40°	5862	5607	5771
45°	5626	5356	5569
50°	5344	5100	5374
55°	5068	4835	5159
60°	4759	4554	4958
65°	4451	4263	4769
70°	4012	3979	4627
75°	3469	3712	4499
80°	2700	3498	4532
85°	1576	3397	4667



TEST NUMBER: P685641
 CATALOG NUMBER: 4CZL-9-UNV-FUL-L940-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	207.0	3.0
10°-20°	589.1	8.6
20°-30°	879.6	12.9
30°-40°	1039.8	15.2
40°-50°	1059.6	15.5
50°-60°	955.4	14.0
60°-70°	756.0	11.1
70°-80°	510.9	7.5
80°-90°	285.7	4.2
90°-100°	155.5	2.3
100°-110°	102.0	1.5
110°-120°	80.9	1.2
120°-130°	68.8	1.0
130°-140°	55.0	0.8
140°-150°	39.4	0.6
150°-160°	25.4	0.4
160°-170°	13.7	0.2
170°-180°	4.3	0.1
0°-30°	1675.7	24.5
0°-40°	2715.6	39.8
0°-60°	4730.6	69.3
0°-90°	6283.3	92.0
90°-120°	338.4	5.0
90°-150°	501.6	7.3
90°-180°	545.0	8.0
0°-180°	6828.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2189	2189	2189	2189	2189	
5°	2188	2184	2170	2183	2182	207
15°	2086	2084	2081	2099	2104	587
25°	1878	1887	1902	1938	1945	864
35°	1598	1620	1657	1710	1727	1000
45°	1283	1309	1373	1437	1463	988
55°	954	989	1068	1149	1178	853
65°	635	667	762	856	892	627
75°	321	366	487	595	630	341
85°	63	141	271	376	414	77
90°	10	78	195	291	327	7
95°	10	51	143	229	261	9
105°	18	45	94	148	169	19
115°	28	49	83	114	127	28
125°	37	50	79	103	111	33
135°	41	50	74	92	98	32
145°	43	47	62	78	82	27
155°	46	46	51	64	66	21
165°	48	47	46	48	52	14
175°	48	47	46	40	40	5
180°	45	45	45	45	45	

TEST NUMBER: P685641

CATALOG NUMBER: 4CZL-9-UNV-FUL-L940-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2188.8	2188.8	2188.8	2188.8	2188.8
2.5°	2195.8	2192.3	2177.8	2189.2	2188.8
5°	2187.5	2184.0	2170.4	2182.7	2181.8
7.5°	2171.2	2169.0	2156.3	2169.9	2169.5
10°	2147.5	2147.5	2136.6	2152.4	2153.7
12.5°	2119.0	2118.6	2112.9	2129.1	2129.1
15°	2086.1	2083.5	2081.3	2099.3	2103.6
17.5°	2039.1	2040.9	2044.8	2066.3	2070.7
20°	1990.9	1994.8	2002.3	2027.7	2033.4
22.5°	1939.1	1943.5	1955.3	1983.0	1992.2
25°	1878.1	1886.8	1902.2	1937.7	1945.2
27.5°	1812.2	1827.6	1847.3	1885.1	1897.8
30°	1749.0	1761.3	1789.8	1829.3	1840.3
32.5°	1676.2	1691.1	1724.4	1771.8	1786.8
35°	1598.0	1620.0	1657.3	1710.0	1726.6
37.5°	1525.2	1542.7	1588.8	1645.0	1664.7
40°	1439.2	1467.7	1520.8	1576.1	1598.9
42.5°	1363.7	1388.2	1447.9	1508.9	1532.6
45°	1283.3	1308.8	1373.3	1437.4	1463.3
47.5°	1197.3	1227.6	1296.5	1368.1	1392.2
50°	1116.6	1148.2	1221.9	1294.3	1324.6
52.5°	1037.1	1070.0	1146.4	1222.8	1250.9
55°	953.7	989.3	1068.3	1149.0	1178.0
57.5°	872.1	907.6	991.9	1075.3	1106.5
60°	790.0	823.4	913.8	999.4	1033.6
62.5°	713.2	745.7	838.7	930.9	960.8
65°	634.6	666.7	762.4	856.3	891.8
67.5°	553.5	592.1	688.2	786.5	824.3
70°	473.6	513.1	619.3	721.6	759.3
72.5°	398.1	442.9	549.9	654.4	693.0
75°	321.3	365.6	487.2	595.1	629.8
77.5°	248.9	300.6	425.7	534.6	575.4
80°	179.5	238.3	370.4	477.1	520.1
82.5°	118.1	185.2	319.1	424.9	463.5
85°	62.8	140.9	270.8	376.1	413.9
87.5°	24.6	104.5	230.4	331.8	369.6
90°	9.7	77.7	194.9	291.0	327.0
92.5°	9.7	60.6	165.9	258.1	291.9
95°	10.5	50.9	143.1	228.7	260.7
97.5°	11.4	46.1	125.1	202.8	231.3
100°	13.2	44.3	111.5	181.7	207.6
102.5°	15.4	44.3	100.5	162.4	187.0
105°	18.0	45.2	93.5	147.5	169.4
107.5°	20.2	46.1	88.7	135.2	154.9
110°	22.8	47.4	86.0	126.0	143.1



TEST NUMBER: P685641

CATALOG NUMBER: 4CZL-9-UNV-FUL-L940-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	25.5	48.3	84.3	119.4	134.3
115°	28.1	48.7	83.4	114.1	126.8
117.5°	30.7	49.6	82.5	110.6	121.6
120°	33.4	50.0	81.6	108.0	117.6
122.5°	35.6	50.0	80.8	105.3	114.1
125°	37.3	50.5	79.4	102.7	111.0
127.5°	38.6	50.9	78.6	100.1	107.5
130°	39.9	50.5	77.2	97.4	104.5
132.5°	40.8	50.0	75.5	94.8	101.4
135°	41.3	49.6	73.7	91.7	97.9
137.5°	41.7	49.2	71.1	88.7	94.4
140°	41.7	48.7	68.0	85.1	90.4
142.5°	42.1	47.8	65.0	81.6	86.5
145°	43.0	47.4	61.9	78.1	82.5
147.5°	43.9	46.5	59.3	74.2	78.1
150°	44.8	46.5	56.6	70.7	74.2
152.5°	45.2	46.5	54.0	67.6	70.2
155°	46.1	46.5	51.4	64.5	66.3
157.5°	46.5	46.5	49.6	60.6	62.3
160°	47.0	47.0	47.8	56.2	58.8
162.5°	47.8	47.0	47.0	51.8	55.3
165°	47.8	47.0	46.1	48.3	52.2
167.5°	48.3	47.4	45.6	45.6	49.6
170°	48.3	47.4	45.6	43.5	45.6
172.5°	48.3	47.4	45.6	41.7	42.6
175°	48.3	47.4	45.6	39.9	40.4
177.5°	48.3	47.4	45.2	38.6	40.4
180°	44.8	44.8	44.8	44.8	44.8

(END OF REPORT)