

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: P685610

Luminaire Tested: **4CZL-7-UNV-FUL-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685610
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-7-UNV-FUL-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT FROSTED LENS MODEL WITH UPLIGHT @80 CRI and 4000K
Light Source: (392) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

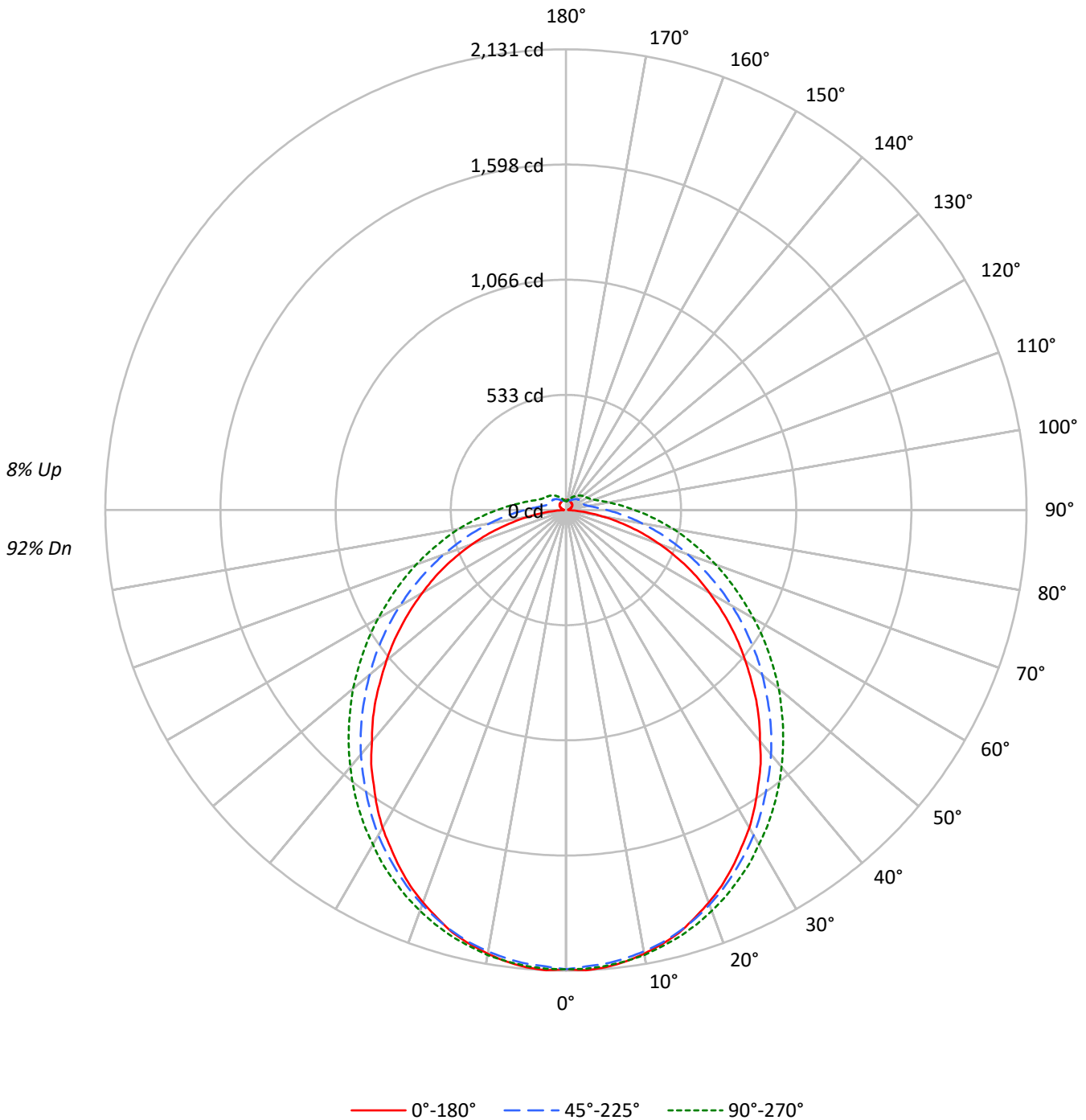
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6626.6 lumens
Efficiency: N/A
Efficacy: 150.6 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): 44
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	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°	6859	6859	6859
5°	6856	6727	6745
10°	6784	6600	6620
15°	6693	6457	6478
20°	6540	6286	6321
25°	6370	6092	6152
30°	6180	5895	5970
35°	5940	5663	5794
40°	5689	5441	5601
45°	5460	5198	5404
50°	5186	4949	5215
55°	4918	4692	5006
60°	4618	4419	4812
65°	4320	4137	4628
70°	3894	3861	4490
75°	3367	3602	4366
80°	2620	3395	4398
85°	1528	3297	4529



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	200.9	3.0
10°-20°	571.7	8.6
20°-30°	853.6	12.9
30°-40°	1009.1	15.2
40°-50°	1028.3	15.5
50°-60°	927.2	14.0
60°-70°	733.7	11.1
70°-80°	495.8	7.5
80°-90°	277.3	4.2
90°-100°	150.9	2.3
100°-110°	99.0	1.5
110°-120°	78.5	1.2
120°-130°	66.8	1.0
130°-140°	53.4	0.8
140°-150°	38.2	0.6
150°-160°	24.6	0.4
160°-170°	13.3	0.2
170°-180°	4.2	0.1
0°-30°	1626.2	24.5
0°-40°	2635.4	39.8
0°-60°	4590.9	69.3
0°-90°	6097.7	92.0
90°-120°	328.4	5.0
90°-150°	486.8	7.3
90°-180°	529.0	8.0
0°-180°	6626.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2124	2124	2124	2124	2124	
5°	2123	2120	2106	2118	2117	201
15°	2024	2022	2020	2037	2042	570
25°	1823	1831	1846	1880	1888	839
35°	1551	1572	1608	1660	1676	971
45°	1245	1270	1333	1395	1420	959
55°	926	960	1037	1115	1143	828
65°	616	647	740	831	866	608
75°	312	355	473	578	611	331
85°	61	137	263	365	402	75
90°	9	75	189	282	317	7
95°	10	49	139	222	253	9
105°	18	44	91	143	164	18
115°	27	47	81	111	123	27
125°	36	49	77	100	108	32
135°	40	48	72	89	95	31
145°	42	46	60	76	80	26
155°	45	45	50	63	64	21
165°	46	46	45	47	51	13
175°	47	46	44	39	39	4
180°	43	43	43	43	43	

TEST NUMBER: P685610

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2124.2	2124.2	2124.2	2124.2	2124.2
2.5°	2131.0	2127.6	2113.5	2124.6	2124.2
5°	2122.9	2119.5	2106.3	2118.2	2117.3
7.5°	2107.1	2105.0	2092.6	2105.8	2105.4
10°	2084.1	2084.1	2073.5	2088.8	2090.1
12.5°	2056.4	2056.0	2050.5	2066.2	2066.2
15°	2024.5	2021.9	2019.8	2037.3	2041.5
17.5°	1978.9	1980.6	1984.4	2005.3	2009.6
20°	1932.1	1935.9	1943.1	1967.8	1973.4
22.5°	1881.8	1886.1	1897.6	1924.4	1933.3
25°	1822.6	1831.1	1846.0	1880.5	1887.8
27.5°	1758.7	1773.6	1792.8	1829.4	1841.8
30°	1697.4	1709.3	1737.0	1775.3	1786.0
32.5°	1626.7	1641.1	1673.5	1719.5	1734.0
35°	1550.8	1572.1	1608.3	1659.5	1675.6
37.5°	1480.1	1497.2	1541.9	1596.4	1615.6
40°	1396.7	1424.3	1475.9	1529.5	1551.7
42.5°	1323.4	1347.2	1405.2	1464.4	1487.4
45°	1245.4	1270.1	1332.8	1394.9	1420.1
47.5°	1162.0	1191.4	1258.2	1327.7	1351.1
50°	1083.6	1114.3	1185.8	1256.1	1285.5
52.5°	1006.5	1038.4	1112.6	1186.7	1213.9
55°	925.6	960.1	1036.7	1115.1	1143.2
57.5°	846.3	880.8	962.6	1043.5	1073.8
60°	766.7	799.1	886.8	969.9	1003.1
62.5°	692.2	723.7	814.0	903.4	932.4
65°	615.9	647.0	739.9	831.0	865.5
67.5°	537.1	574.6	667.9	763.3	799.9
70°	459.6	497.9	601.0	700.2	736.9
72.5°	386.3	429.8	533.7	635.1	672.6
75°	311.8	354.8	472.8	577.6	611.2
77.5°	241.5	291.8	413.2	518.8	558.4
80°	174.2	231.3	359.5	463.0	504.7
82.5°	114.6	179.7	309.7	412.3	449.8
85°	60.9	136.7	262.8	365.0	401.7
87.5°	23.9	101.4	223.6	322.0	358.6
90°	9.4	75.4	189.1	282.4	317.3
92.5°	9.4	58.8	161.0	250.5	283.2
95°	10.2	49.4	138.9	221.9	253.0
97.5°	11.1	44.7	121.4	196.8	224.5
100°	12.8	43.0	108.2	176.3	201.5
102.5°	14.9	43.0	97.5	157.6	181.4
105°	17.5	43.9	90.7	143.1	164.4
107.5°	19.6	44.7	86.0	131.2	150.4
110°	22.1	46.0	83.5	122.2	138.9

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	24.7	46.9	81.8	115.9	130.3
115°	27.3	47.3	80.9	110.7	123.1
117.5°	29.8	48.1	80.1	107.3	118.0
120°	32.4	48.6	79.2	104.8	114.2
122.5°	34.5	48.6	78.4	102.2	110.7
125°	36.2	49.0	77.1	99.7	107.8
127.5°	37.5	49.4	76.2	97.1	104.4
130°	38.8	49.0	75.0	94.6	101.4
132.5°	39.6	48.6	73.3	92.0	98.4
135°	40.0	48.1	71.6	89.0	95.0
137.5°	40.5	47.7	69.0	86.0	91.6
140°	40.5	47.3	66.0	82.6	87.7
142.5°	40.9	46.4	63.0	79.2	83.9
145°	41.7	46.0	60.1	75.8	80.1
147.5°	42.6	45.1	57.5	72.0	75.8
150°	43.4	45.1	54.9	68.6	72.0
152.5°	43.9	45.1	52.4	65.6	68.2
155°	44.7	45.1	49.8	62.6	64.3
157.5°	45.1	45.1	48.1	58.8	60.5
160°	45.6	45.6	46.4	54.5	57.1
162.5°	46.4	45.6	45.6	50.3	53.7
165°	46.4	45.6	44.7	46.9	50.7
167.5°	46.9	46.0	44.3	44.3	48.1
170°	46.9	46.0	44.3	42.2	44.3
172.5°	46.9	46.0	44.3	40.5	41.3
175°	46.9	46.0	44.3	38.8	39.2
177.5°	46.9	46.0	43.9	37.5	39.2
180°	43.4	43.4	43.4	43.4	43.4

(END OF REPORT)