

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: P685649

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685649
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-5-UNV-FUL-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT FROSTED LENS MODEL WITH UPLIGHT @90 CRI and 5000K
Light Source: (392) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

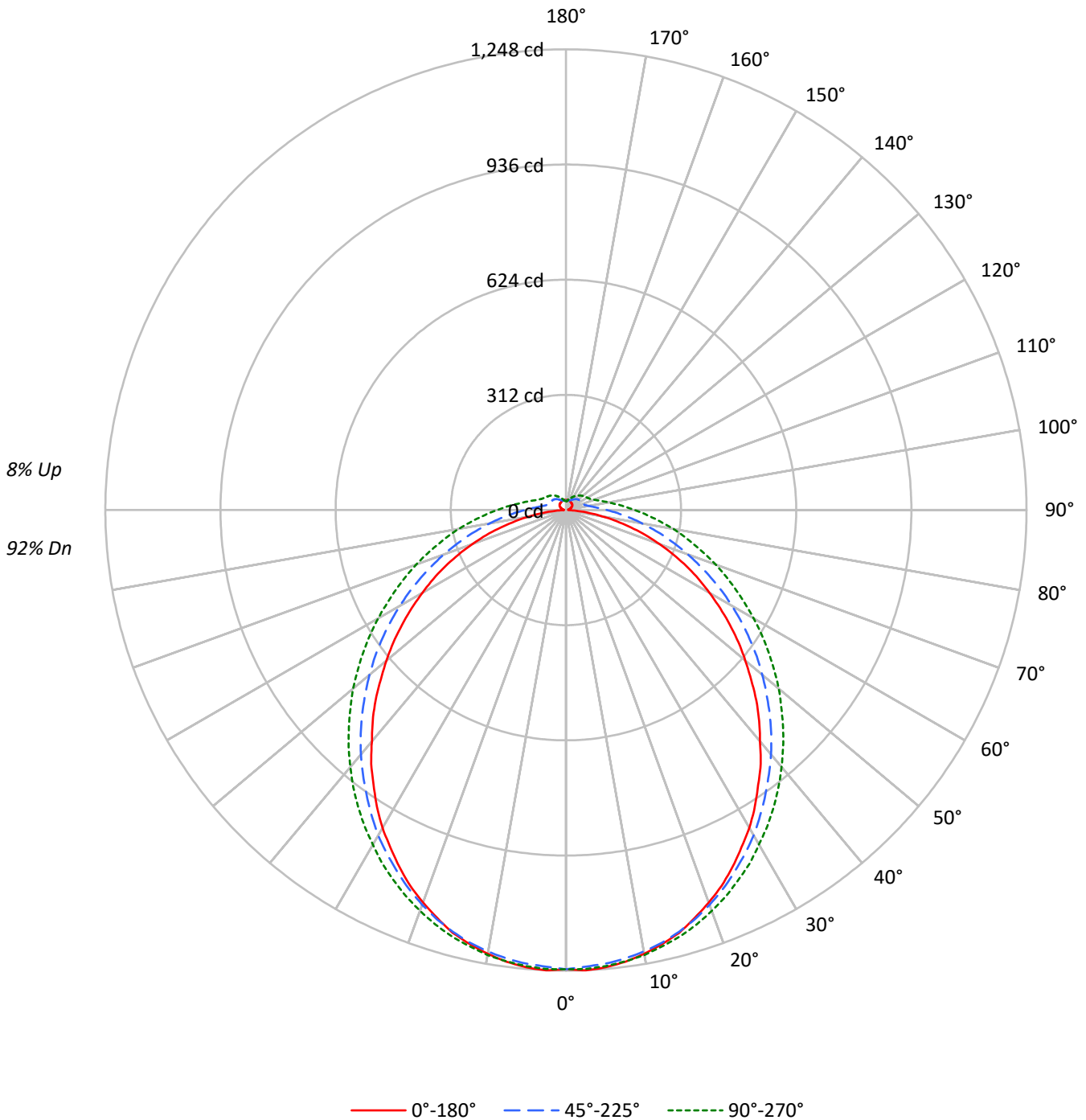
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3881.3 lumens
Efficiency: N/A
Efficacy: 125.2 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): 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				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	95
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°	4018	4018	4018
5°	4016	3940	3951
10°	3973	3866	3877
15°	3920	3782	3794
20°	3831	3682	3702
25°	3731	3568	3604
30°	3620	3453	3497
35°	3479	3317	3394
40°	3332	3187	3281
45°	3198	3045	3166
50°	3038	2899	3054
55°	2881	2748	2932
60°	2705	2588	2818
65°	2530	2423	2711
70°	2281	2262	2630
75°	1972	2109	2558
80°	1534	1989	2576
85°	896	1931	2653



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	117.7	3.0
10°-20°	334.8	8.6
20°-30°	500.0	12.9
30°-40°	591.1	15.2
40°-50°	602.3	15.5
50°-60°	543.1	14.0
60°-70°	429.7	11.1
70°-80°	290.4	7.5
80°-90°	162.4	4.2
90°-100°	88.4	2.3
100°-110°	58.0	1.5
110°-120°	46.0	1.2
120°-130°	39.1	1.0
130°-140°	31.3	0.8
140°-150°	22.4	0.6
150°-160°	14.4	0.4
160°-170°	7.8	0.2
170°-180°	2.4	0.1
0°-30°	952.5	24.5
0°-40°	1543.6	39.8
0°-60°	2689.0	69.3
0°-90°	3571.5	92.0
90°-120°	192.3	5.0
90°-150°	285.1	7.3
90°-180°	310.0	8.0
0°-180°	3881.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1244	1244	1244	1244	1244	
5°	1243	1241	1234	1241	1240	118
15°	1186	1184	1183	1193	1196	334
25°	1068	1072	1081	1102	1106	491
35°	908	921	942	972	982	569
45°	730	744	781	817	832	562
55°	542	562	607	653	670	485
65°	361	379	433	487	507	356
75°	183	208	277	338	358	194
85°	36	80	154	214	235	44
90°	6	44	111	165	186	4
95°	6	29	81	130	148	5
105°	10	26	53	84	96	11
115°	16	28	47	65	72	16
125°	21	29	45	58	63	19
135°	24	28	42	52	56	18
145°	24	27	35	44	47	15
155°	26	26	29	37	38	12
165°	27	27	26	27	30	8
175°	27	27	26	23	23	3
180°	25	25	25	25	25	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1244.2	1244.2	1244.2	1244.2	1244.2
2.5°	1248.2	1246.2	1237.9	1244.4	1244.2
5°	1243.4	1241.4	1233.7	1240.7	1240.2
7.5°	1234.2	1232.9	1225.7	1233.4	1233.2
10°	1220.7	1220.7	1214.5	1223.5	1224.2
12.5°	1204.5	1204.2	1201.0	1210.2	1210.2
15°	1185.8	1184.3	1183.0	1193.3	1195.8
17.5°	1159.1	1160.1	1162.3	1174.6	1177.0
20°	1131.6	1133.9	1138.1	1152.6	1155.8
22.5°	1102.2	1104.7	1111.4	1127.2	1132.4
25°	1067.5	1072.5	1081.2	1101.5	1105.7
27.5°	1030.1	1038.8	1050.1	1071.5	1078.8
30°	994.2	1001.2	1017.4	1039.8	1046.1
32.5°	952.8	961.2	980.2	1007.2	1015.6
35°	908.4	920.8	942.0	972.0	981.5
37.5°	866.9	876.9	903.1	935.1	946.3
40°	818.0	834.3	864.4	895.9	908.9
42.5°	775.1	789.1	823.0	857.7	871.2
45°	729.5	744.0	780.6	817.0	831.8
47.5°	680.6	697.8	737.0	777.6	791.4
50°	634.7	652.6	694.6	735.7	752.9
52.5°	589.5	608.2	651.6	695.1	711.0
55°	542.1	562.3	607.2	653.1	669.6
57.5°	495.7	515.9	563.8	611.2	628.9
60°	449.1	468.0	519.4	568.1	587.5
62.5°	405.4	423.9	476.8	529.1	546.1
65°	360.7	379.0	433.3	486.7	506.9
67.5°	314.6	336.5	391.2	447.1	468.5
70°	269.2	291.6	352.0	410.1	431.6
72.5°	226.3	251.7	312.6	372.0	393.9
75°	182.6	207.8	276.9	338.3	358.0
77.5°	141.5	170.9	242.0	303.9	327.1
80°	102.0	135.5	210.6	271.2	295.6
82.5°	67.1	105.3	181.4	241.5	263.5
85°	35.7	80.1	153.9	213.8	235.3
87.5°	14.0	59.4	131.0	188.6	210.1
90°	5.5	44.2	110.8	165.4	185.9
92.5°	5.5	34.4	94.3	146.7	165.9
95°	6.0	28.9	81.3	130.0	148.2
97.5°	6.5	26.2	71.1	115.3	131.5
100°	7.5	25.2	63.4	103.3	118.0
102.5°	8.7	25.2	57.1	92.3	106.3
105°	10.2	25.7	53.1	83.8	96.3
107.5°	11.5	26.2	50.4	76.8	88.1
110°	13.0	26.9	48.9	71.6	81.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	14.5	27.4	47.9	67.9	76.3
115°	16.0	27.7	47.4	64.9	72.1
117.5°	17.5	28.2	46.9	62.9	69.1
120°	19.0	28.4	46.4	61.4	66.9
122.5°	20.2	28.4	45.9	59.9	64.9
125°	21.2	28.7	45.2	58.4	63.1
127.5°	22.0	28.9	44.7	56.9	61.1
130°	22.7	28.7	43.9	55.4	59.4
132.5°	23.2	28.4	42.9	53.9	57.6
135°	23.5	28.2	41.9	52.1	55.6
137.5°	23.7	27.9	40.4	50.4	53.6
140°	23.7	27.7	38.7	48.4	51.4
142.5°	24.0	27.2	36.9	46.4	49.1
145°	24.4	26.9	35.2	44.4	46.9
147.5°	24.9	26.4	33.7	42.2	44.4
150°	25.4	26.4	32.2	40.2	42.2
152.5°	25.7	26.4	30.7	38.4	39.9
155°	26.2	26.4	29.2	36.7	37.7
157.5°	26.4	26.4	28.2	34.4	35.4
160°	26.7	26.7	27.2	31.9	33.4
162.5°	27.2	26.7	26.7	29.4	31.4
165°	27.2	26.7	26.2	27.4	29.7
167.5°	27.4	26.9	25.9	25.9	28.2
170°	27.4	26.9	25.9	24.7	25.9
172.5°	27.4	26.9	25.9	23.7	24.2
175°	27.4	26.9	25.9	22.7	23.0
177.5°	27.4	26.9	25.7	22.0	23.0
180°	25.4	25.4	25.4	25.4	25.4

(END OF REPORT)