

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: P685639

Luminaire Tested: **4CZL-5-UNV-FUL-L940-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685639
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-L940-CD-U
Description: METALUX CRUZE LINEAR 4FT FROSTED LENS MODEL WITH UPLIGHT @90 CRI and 4000K
Light Source: (392) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

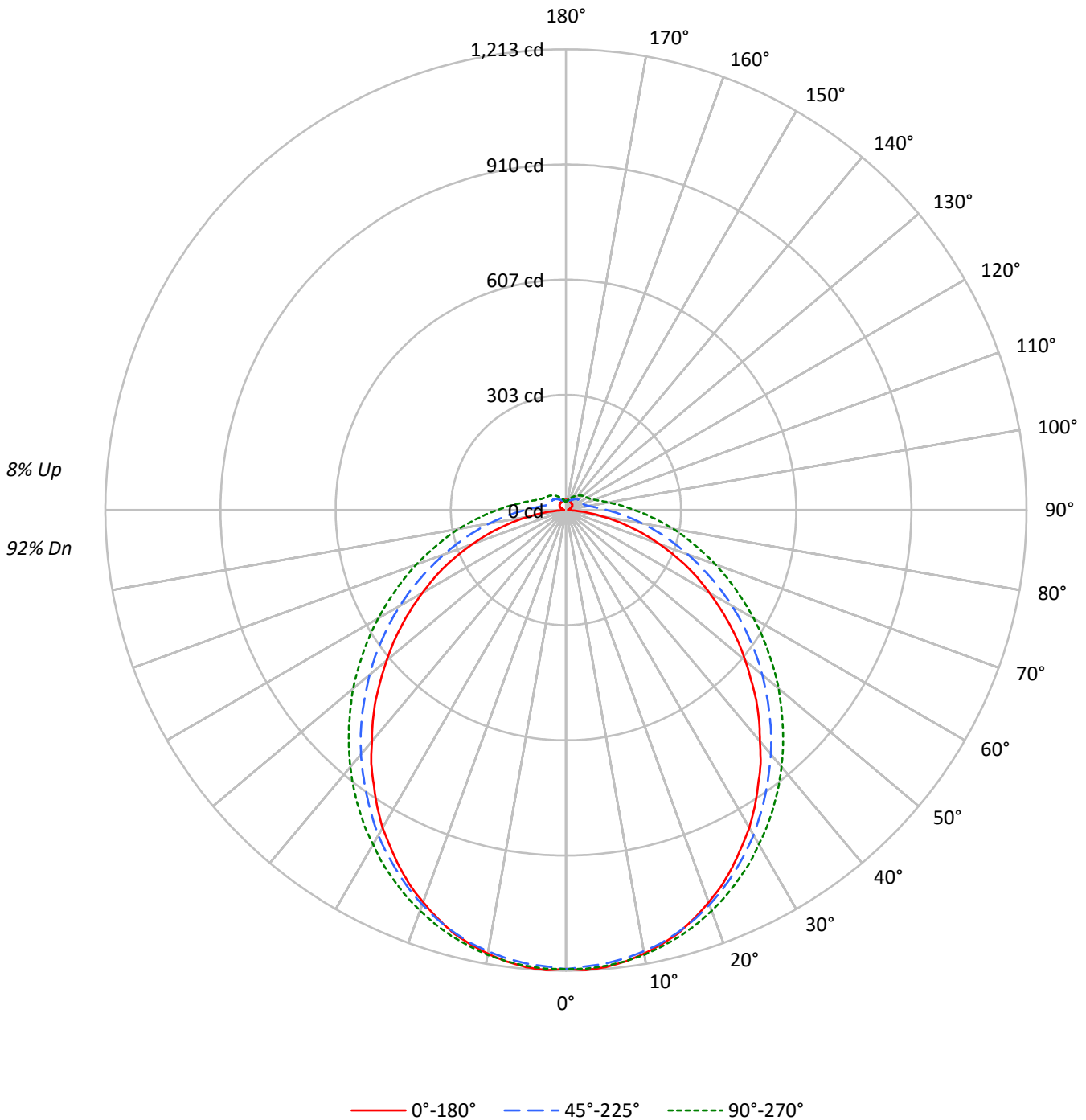
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3770.8 lumens
Efficiency: N/A
Efficacy: 121.6 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): 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°	3903	3903	3903
5°	3902	3828	3839
10°	3861	3756	3767
15°	3809	3674	3686
20°	3722	3577	3597
25°	3625	3467	3501
30°	3517	3355	3397
35°	3380	3222	3297
40°	3237	3096	3187
45°	3107	2958	3075
50°	2951	2816	2968
55°	2799	2670	2849
60°	2628	2515	2738
65°	2458	2354	2634
70°	2215	2197	2555
75°	1915	2049	2485
80°	1491	1932	2502
85°	871	1876	2578



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	3.0
10°-20°	325.3	8.6
20°-30°	485.8	12.9
30°-40°	574.2	15.2
40°-50°	585.2	15.5
50°-60°	527.6	14.0
60°-70°	417.5	11.1
70°-80°	282.1	7.5
80°-90°	157.8	4.2
90°-100°	85.9	2.3
100°-110°	56.3	1.5
110°-120°	44.7	1.2
120°-130°	38.0	1.0
130°-140°	30.4	0.8
140°-150°	21.8	0.6
150°-160°	14.0	0.4
160°-170°	7.6	0.2
170°-180°	2.4	0.1
0°-30°	925.4	24.5
0°-40°	1499.6	39.8
0°-60°	2612.4	69.3
0°-90°	3469.8	92.0
90°-120°	186.9	5.0
90°-150°	277.0	7.3
90°-180°	301.0	8.0
0°-180°	3770.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1209	1209	1209	1209	1209	
5°	1208	1206	1199	1205	1205	115
15°	1152	1151	1149	1159	1162	324
25°	1037	1042	1050	1070	1074	477
35°	882	895	915	944	954	552
45°	709	723	758	794	808	546
55°	527	546	590	634	650	471
65°	350	368	421	473	492	346
75°	177	202	269	329	348	188
85°	35	78	150	208	229	42
90°	5	43	108	161	181	4
95°	6	28	79	126	144	5
105°	10	25	52	81	94	10
115°	16	27	46	63	70	15
125°	21	28	44	57	61	18
135°	23	27	41	51	54	18
145°	24	26	34	43	46	15
155°	25	26	28	36	37	12
165°	26	26	25	27	29	7
175°	27	26	25	22	22	3
180°	25	25	25	25	25	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1208.7	1208.7	1208.7	1208.7	1208.7
2.5°	1212.6	1210.7	1202.7	1209.0	1208.7
5°	1208.0	1206.1	1198.6	1205.3	1204.9
7.5°	1199.0	1197.8	1190.8	1198.3	1198.1
10°	1186.0	1186.0	1179.9	1188.6	1189.3
12.5°	1170.2	1170.0	1166.8	1175.8	1175.8
15°	1152.0	1150.6	1149.4	1159.3	1161.7
17.5°	1126.1	1127.1	1129.2	1141.1	1143.5
20°	1099.4	1101.6	1105.7	1119.8	1122.9
22.5°	1070.8	1073.2	1079.8	1095.1	1100.1
25°	1037.1	1042.0	1050.5	1070.1	1074.2
27.5°	1000.8	1009.3	1020.2	1041.0	1048.0
30°	965.9	972.7	988.4	1010.2	1016.3
32.5°	925.6	933.9	952.3	978.5	986.7
35°	882.5	894.6	915.2	944.3	953.5
37.5°	842.3	852.0	877.4	908.4	919.3
40°	794.8	810.5	839.8	870.4	883.0
42.5°	753.1	766.6	799.6	833.3	846.4
45°	708.7	722.8	758.4	793.8	808.1
47.5°	661.2	677.9	716.0	755.5	768.8
50°	616.6	634.1	674.8	714.8	731.5
52.5°	572.7	590.9	633.1	675.3	690.8
55°	526.7	546.3	589.9	634.5	650.5
57.5°	481.6	501.2	547.8	593.8	611.0
60°	436.3	454.7	504.6	551.9	570.8
62.5°	393.9	411.8	463.2	514.1	530.6
65°	350.5	368.2	421.0	472.9	492.5
67.5°	305.6	327.0	380.0	434.3	455.2
70°	261.5	283.3	342.0	398.5	419.3
72.5°	219.8	244.6	303.7	361.4	382.7
75°	177.4	201.9	269.0	328.7	347.8
77.5°	137.4	166.0	235.1	295.2	317.8
80°	99.1	131.6	204.6	263.5	287.2
82.5°	65.2	102.3	176.2	234.6	256.0
85°	34.7	77.8	149.5	207.7	228.6
87.5°	13.6	57.7	127.2	183.2	204.1
90°	5.3	42.9	107.6	160.7	180.6
92.5°	5.3	33.4	91.6	142.5	161.2
95°	5.8	28.1	79.0	126.3	144.0
97.5°	6.3	25.4	69.1	112.0	127.7
100°	7.3	24.5	61.6	100.3	114.6
102.5°	8.5	24.5	55.5	89.7	103.3
105°	9.9	25.0	51.6	81.4	93.6
107.5°	11.1	25.4	49.0	74.7	85.6
110°	12.6	26.2	47.5	69.6	79.0

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	14.1	26.7	46.5	65.9	74.2
115°	15.5	26.9	46.1	63.0	70.0
117.5°	17.0	27.4	45.6	61.1	67.1
120°	18.4	27.6	45.1	59.6	65.0
122.5°	19.6	27.6	44.6	58.2	63.0
125°	20.6	27.9	43.9	56.7	61.3
127.5°	21.3	28.1	43.4	55.3	59.4
130°	22.1	27.9	42.7	53.8	57.7
132.5°	22.5	27.6	41.7	52.4	56.0
135°	22.8	27.4	40.7	50.7	54.1
137.5°	23.0	27.1	39.3	49.0	52.1
140°	23.0	26.9	37.6	47.0	49.9
142.5°	23.3	26.4	35.9	45.1	47.7
145°	23.8	26.2	34.2	43.1	45.6
147.5°	24.2	25.7	32.7	41.0	43.1
150°	24.7	25.7	31.3	39.0	41.0
152.5°	25.0	25.7	29.8	37.3	38.8
155°	25.4	25.7	28.4	35.6	36.6
157.5°	25.7	25.7	27.4	33.4	34.4
160°	25.9	25.9	26.4	31.0	32.5
162.5°	26.4	25.9	25.9	28.6	30.5
165°	26.4	25.9	25.4	26.7	28.8
167.5°	26.7	26.2	25.2	25.2	27.4
170°	26.7	26.2	25.2	24.0	25.2
172.5°	26.7	26.2	25.2	23.0	23.5
175°	26.7	26.2	25.2	22.1	22.3
177.5°	26.7	26.2	25.0	21.3	22.3
180°	24.7	24.7	24.7	24.7	24.7

(END OF REPORT)