

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: P685761

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685761
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-9-UNV-N-LVR-L940-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH NARROW LENS @90 CRI and 4000K
Light Source: (588) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

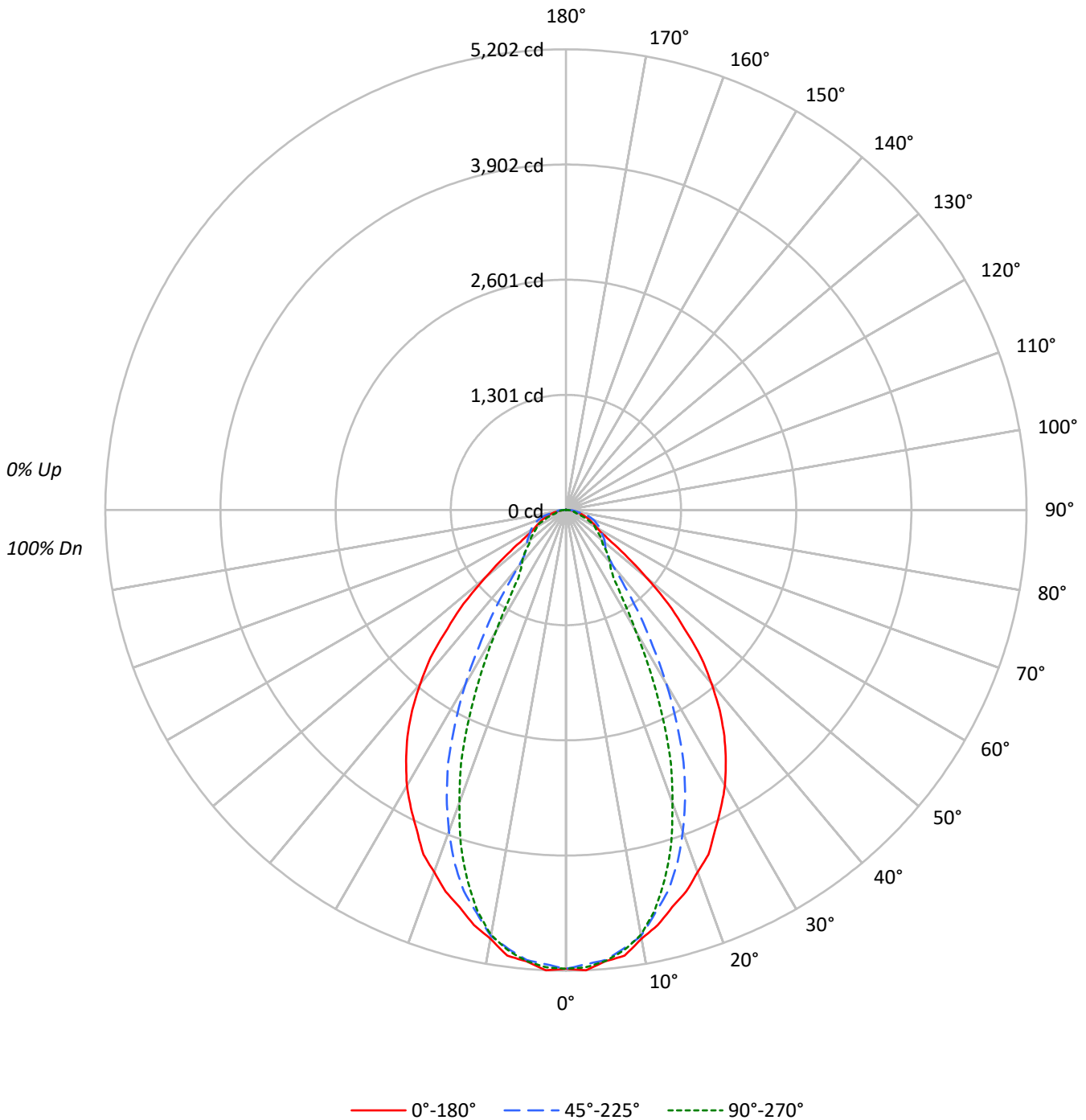
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6133.1 lumens
Efficiency: N/A
Efficacy: 113.6 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.8 / 0.85
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')
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: P685761
CATALOG NUMBER: 4CZL-9-UNV-N-LVR-L940-CD-U

Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	100	
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	88	
2	103	97	92	87	101	95	90	86	92	88	84	88	85	82	86	83	80	80	78	
3	97	88	82	77	94	87	81	76	84	79	75	81	77	73	79	75	72	72	70	
4	90	81	74	68	88	79	73	68	77	71	67	75	70	66	73	69	65	65	63	
5	85	74	67	62	83	73	66	61	71	65	61	69	64	60	68	63	59	59	58	
6	80	69	61	56	78	68	61	56	66	60	55	65	59	55	63	58	55	55	53	
7	75	64	57	51	73	63	56	51	62	55	51	60	55	51	59	54	50	50	49	
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	47	45	
9	67	56	49	44	66	55	49	44	54	48	44	53	48	44	52	47	43	43	42	
10	64	52	46	41	62	52	45	41	51	45	41	50	45	41	49	44	41	41	39	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16727	16727	16727
5°	16579	16532	16575
10°	16112	16012	15974
15°	15514	14895	14422
20°	14943	13269	12079
25°	14200	11204	9210
30°	13394	8475	5885
35°	12294	5746	3697
40°	10782	3500	3243
45°	8638	2916	2906
50°	5973	2882	2624
55°	3519	2856	2471
60°	2622	2968	2441
65°	2482	2988	2146
70°	2387	3187	1620
75°	2251	3198	1385
80°	2090	2652	1568
85°	1853	3220	1934



TEST NUMBER: P685761
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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	481.2	7.8
10°-20°	1245.9	20.3
20°-30°	1455.5	23.7
30°-40°	1079.8	17.6
40°-50°	715.9	11.7
50°-60°	474.8	7.7
60°-70°	354.2	5.8
70°-80°	209.1	3.4
80°-90°	88.0	1.4
90°-100°	19.0	0.3
100°-110°	2.6	0.0
110°-120°	1.3	0.0
120°-130°	1.2	0.0
130°-140°	1.2	0.0
140°-150°	1.2	0.0
150°-160°	1.1	0.0
160°-170°	0.8	0.0
170°-180°	0.3	0.0
0°-30°	3182.6	51.9
0°-40°	4262.5	69.5
0°-60°	5453.1	88.9
0°-90°	6104.5	99.5
90°-120°	22.9	0.4
90°-150°	26.5	0.4
90°-180°	29.0	0.5
0°-180°	6133.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5180	5180	5180	5180	5180	
5°	5115	5110	5100	5119	5113	484
15°	4641	4585	4455	4379	4314	1309
25°	3985	3699	3144	2697	2585	1836
35°	3119	2311	1458	985	938	1936
45°	1892	1116	639	663	636	1456
55°	625	549	507	490	439	615
65°	325	363	391	382	281	324
75°	180	202	256	186	111	190
85°	50	61	87	115	52	54
90°	1	18	43	75	15	3
95°	0	3	17	37	8	0
105°	0	1	2	3	3	0
115°	0	1	1	2	2	0
125°	1	1	1	2	2	1
135°	1	1	1	2	2	1
145°	1	2	2	2	2	1
155°	2	2	2	3	3	1
165°	2	3	3	3	3	1
175°	2	3	3	4	4	0
180°	3	3	3	3	3	

TEST NUMBER: P685761

CATALOG NUMBER: 4CZL-9-UNV-N-LVR-L940-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5180.0	5180.0	5180.0	5180.0	5180.0
2.5°	5202.4	5174.3	5133.9	5170.4	5167.3
5°	5114.6	5110.2	5100.1	5118.6	5113.3
7.5°	5075.1	5051.4	4995.3	5038.7	5014.1
10°	4913.6	4886.0	4883.3	4874.6	4871.5
12.5°	4799.1	4765.7	4659.1	4653.4	4629.7
15°	4640.6	4585.3	4455.4	4378.6	4314.1
17.5°	4517.8	4397.5	4180.7	4037.6	3954.7
20°	4348.4	4215.8	3861.2	3611.5	3514.9
22.5°	4208.8	3974.0	3518.0	3164.7	3098.4
25°	3985.4	3698.8	3144.5	2697.3	2585.0
27.5°	3791.4	3396.0	2703.9	2213.2	2075.4
30°	3592.2	3056.7	2272.9	1738.4	1578.2
32.5°	3360.0	2714.9	1829.2	1304.3	1188.5
35°	3118.6	2310.7	1457.5	985.3	937.9
37.5°	2852.7	1947.3	1095.4	822.9	830.8
40°	2557.8	1630.4	830.3	754.4	769.3
42.5°	2263.7	1363.6	690.8	709.7	714.0
45°	1891.5	1116.1	638.6	662.7	636.4
47.5°	1566.3	912.0	601.7	599.1	561.8
50°	1188.9	743.5	573.6	542.0	522.3
52.5°	880.4	627.1	546.8	512.2	492.0
55°	625.0	549.0	507.3	489.8	438.9
57.5°	469.6	493.7	477.1	437.6	402.0
60°	406.0	445.0	459.5	412.5	377.9
62.5°	366.5	403.3	431.0	397.6	345.8
65°	324.8	362.9	391.0	382.3	280.9
67.5°	288.3	330.9	365.6	327.8	229.5
70°	252.8	292.3	337.5	278.2	171.6
72.5°	214.6	244.5	298.9	216.4	125.1
75°	180.4	201.9	256.3	186.1	111.0
77.5°	144.4	162.4	175.5	169.4	97.9
80°	112.4	130.3	142.6	154.0	84.3
82.5°	81.6	93.5	113.2	136.5	70.2
85°	50.0	61.0	86.9	115.4	52.2
87.5°	21.5	37.3	63.6	95.7	34.2
90°	0.9	18.4	43.4	74.6	15.4
92.5°	0.4	7.9	28.1	54.9	10.1
95°	0.4	3.1	17.1	37.3	7.9
97.5°	0.4	1.3	8.8	24.1	5.7
100°	0.4	0.9	4.8	14.0	3.9
102.5°	0.4	0.9	2.2	7.0	3.1
105°	0.4	0.9	1.8	3.1	2.6
107.5°	0.4	0.9	1.3	2.2	2.2
110°	0.4	0.9	1.3	2.2	2.2



TEST NUMBER: P685761
CATALOG NUMBER: 4CZL-9-UNV-N-LVR-L940-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.4	0.9	1.3	2.2	2.2
115°	0.4	0.9	1.3	1.8	1.8
117.5°	0.4	0.9	1.3	1.8	1.8
120°	0.4	0.9	1.3	1.8	1.8
122.5°	0.4	0.9	1.3	1.8	1.8
125°	0.9	0.9	1.3	1.8	1.8
127.5°	0.9	1.3	1.3	1.8	1.8
130°	0.9	1.3	1.3	1.8	1.8
132.5°	0.9	1.3	1.3	1.8	1.8
135°	0.9	1.3	1.3	1.8	1.8
137.5°	0.9	1.3	1.8	1.8	1.8
140°	1.3	1.8	1.8	1.8	1.8
142.5°	1.3	1.8	1.8	2.2	1.8
145°	1.3	1.8	1.8	2.2	2.2
147.5°	1.3	1.8	2.2	2.2	2.2
150°	1.3	1.8	2.2	2.6	2.6
152.5°	1.8	1.8	2.2	2.6	2.6
155°	1.8	2.2	2.2	2.6	2.6
157.5°	1.8	2.2	2.2	2.6	3.1
160°	1.8	2.2	2.6	3.1	3.1
162.5°	1.8	2.2	2.6	3.1	3.1
165°	2.2	2.6	2.6	3.1	3.1
167.5°	2.2	2.6	3.1	3.1	3.5
170°	2.2	2.6	3.1	3.5	3.5
172.5°	2.2	2.6	3.1	3.5	3.5
175°	2.2	2.6	3.1	3.5	3.9
177.5°	2.2	2.6	3.1	3.5	3.9
180°	3.1	3.1	3.1	3.1	3.1

(END OF REPORT)