

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: P685371

Luminaire Tested: **4CZL-9-UNV-N-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685371
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-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT NARROW LENS MODEL @80 CRI and 4000K
Light Source: (588) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

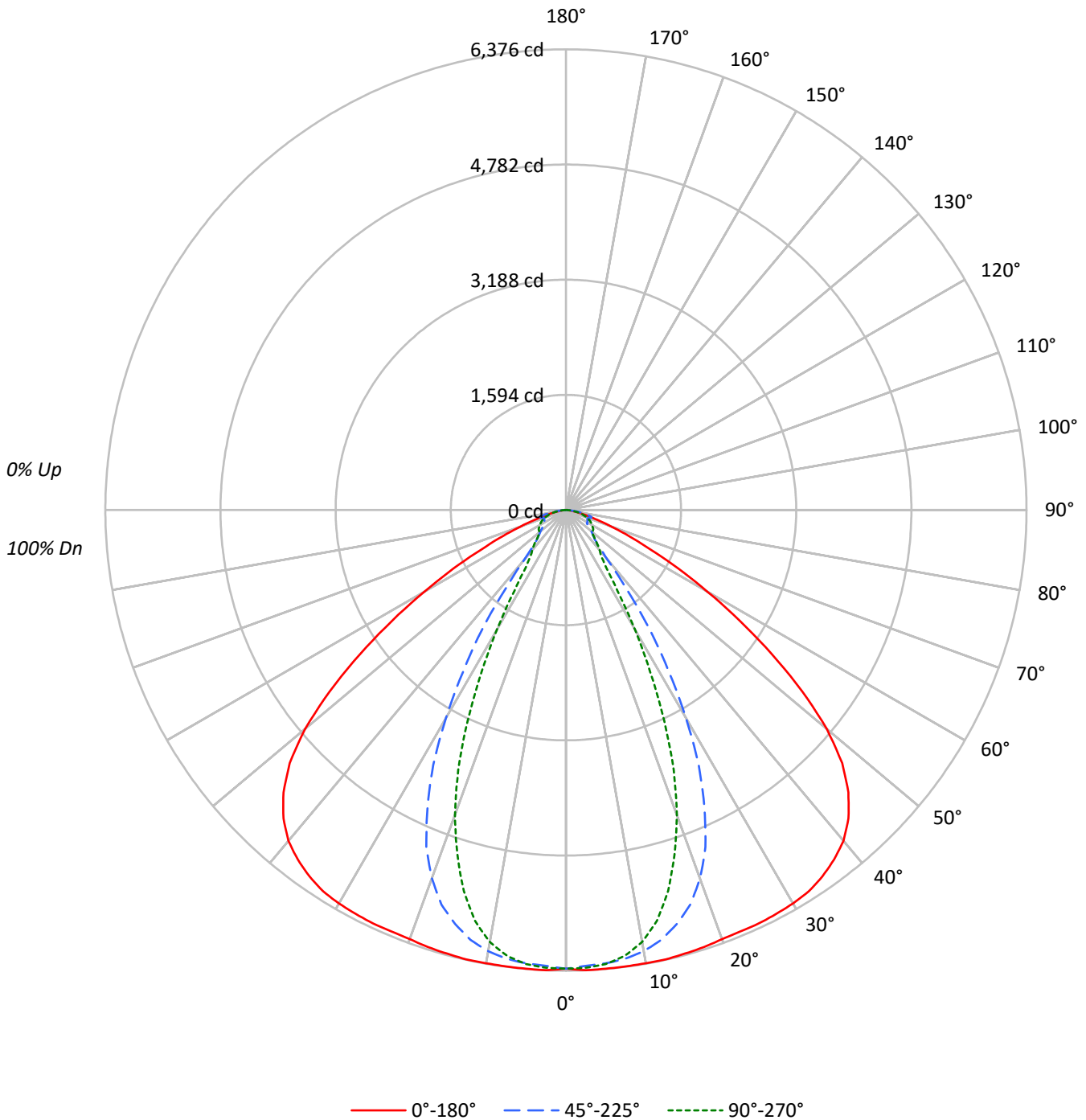
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8961.1 lumens
Efficiency: N/A
Efficacy: 165.9 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 0.81 / 0.89
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 (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				
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100	100
1	111	107	104	101	109	105	102	99	101	99	96	97	95	93	94	92	91	89	89	89	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	80	79	79	79	79
3	96	88	81	76	94	86	80	76	84	79	74	81	77	73	79	75	72	70	70	70	70
4	90	80	73	68	88	79	72	67	77	71	66	74	70	66	72	68	65	63	63	63	63
5	84	74	66	61	82	73	66	60	71	64	60	69	63	59	67	62	59	57	57	57	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	53	52	52	52	52
7	74	63	55	50	73	62	55	50	61	54	50	59	54	49	58	53	49	47	47	47	47
8	70	58	51	46	68	58	51	46	56	50	46	55	50	45	54	49	45	44	44	44	44
9	66	54	47	42	65	54	47	42	53	47	42	52	46	42	51	46	42	40	40	40	40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37	37	37	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20496	20496	20496
5°	20656	20418	20449
10°	20886	20331	19910
15°	21250	19828	18254
20°	21718	18646	15431
25°	22499	16161	11466
30°	23440	12377	7114
35°	24404	8002	3816
40°	25194	3725	3055
45°	25249	2527	2602
50°	23672	2315	2395
55°	19571	2086	2598
60°	14648	2200	2667
65°	9875	2515	2856
70°	6268	3068	2939
75°	3782	4569	2933
80°	2308	4078	2732
85°	1493	2642	1875



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	600.9	6.7
10°-20°	1658.9	18.5
20°-30°	2118.7	23.6
30°-40°	1718.4	19.2
40°-50°	1215.9	13.6
50°-60°	791.9	8.8
60°-70°	486.3	5.4
70°-80°	288.8	3.2
80°-90°	81.2	0.9
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	4378.6	48.9
0°-40°	6097.0	68.0
0°-60°	8104.7	90.4
0°-90°	8961.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8961.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6347	6347	6347	6347	6347	
5°	6372	6359	6299	6324	6309	608
15°	6356	6270	5931	5623	5460	1800
25°	6315	5793	4536	3526	3218	2920
35°	6190	4203	2030	1089	968	3872
45°	5529	2116	553	588	570	4217
55°	3476	712	371	433	462	3106
65°	1292	365	329	395	374	1343
75°	303	207	366	268	235	354
85°	40	80	71	64	51	56
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6347.2	6347.2	6347.2	6347.2	6347.2
2.5°	6375.5	6363.0	6314.6	6352.7	6341.8
5°	6372.3	6358.6	6298.8	6324.4	6308.6
7.5°	6370.1	6349.9	6265.0	6257.4	6224.8
10°	6369.5	6334.2	6200.3	6126.8	6071.9
12.5°	6370.6	6308.0	6094.2	5932.0	5820.5
15°	6356.5	6270.5	5930.9	5622.9	5460.2
17.5°	6343.4	6184.5	5725.2	5244.7	5000.4
20°	6320.0	6099.6	5425.9	4781.1	4490.5
22.5°	6313.5	5971.2	5047.7	4184.1	3896.3
25°	6314.6	5793.3	4535.7	3526.2	3218.2
27.5°	6302.6	5556.0	3977.9	2890.1	2525.5
30°	6286.3	5219.7	3319.4	2208.2	1907.9
32.5°	6257.4	4747.9	2645.2	1573.7	1324.5
35°	6190.5	4202.6	2029.8	1088.9	968.1
37.5°	6097.4	3596.4	1368.6	817.3	797.8
40°	5976.6	3046.3	883.7	714.5	724.8
42.5°	5789.4	2571.2	645.4	649.7	650.8
45°	5528.8	2115.7	553.4	588.2	569.7
47.5°	5186.0	1661.4	502.8	512.6	509.9
50°	4712.0	1244.0	460.9	458.7	476.7
52.5°	4125.9	920.2	417.9	436.4	470.2
55°	3476.2	712.3	370.6	432.6	461.5
57.5°	2853.1	577.4	343.4	421.7	438.6
60°	2268.1	481.0	340.7	401.6	413.0
62.5°	1752.2	412.5	339.0	391.8	396.2
65°	1292.4	365.1	329.2	395.1	373.8
67.5°	941.4	349.9	321.6	389.6	344.5
70°	663.9	307.5	324.9	359.7	311.3
72.5°	450.6	256.8	361.3	317.3	272.6
75°	303.1	207.3	366.2	268.3	235.1
77.5°	197.0	172.5	311.3	219.3	194.8
80°	124.1	143.7	219.3	168.7	146.9
82.5°	80.5	110.5	138.8	119.2	101.2
85°	40.3	80.5	71.3	63.7	50.6
87.5°	23.9	49.0	38.1	27.8	25.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)