

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: P685583

Luminaire Tested: **4CZL-16-UNV-FL-L940-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685583
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-FL-L940-CD-U
Description: METALUX CRUZE LINEAR 4FT FROSTED LENS MODEL @90 CRI and 4000K
Light Source: (588) 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

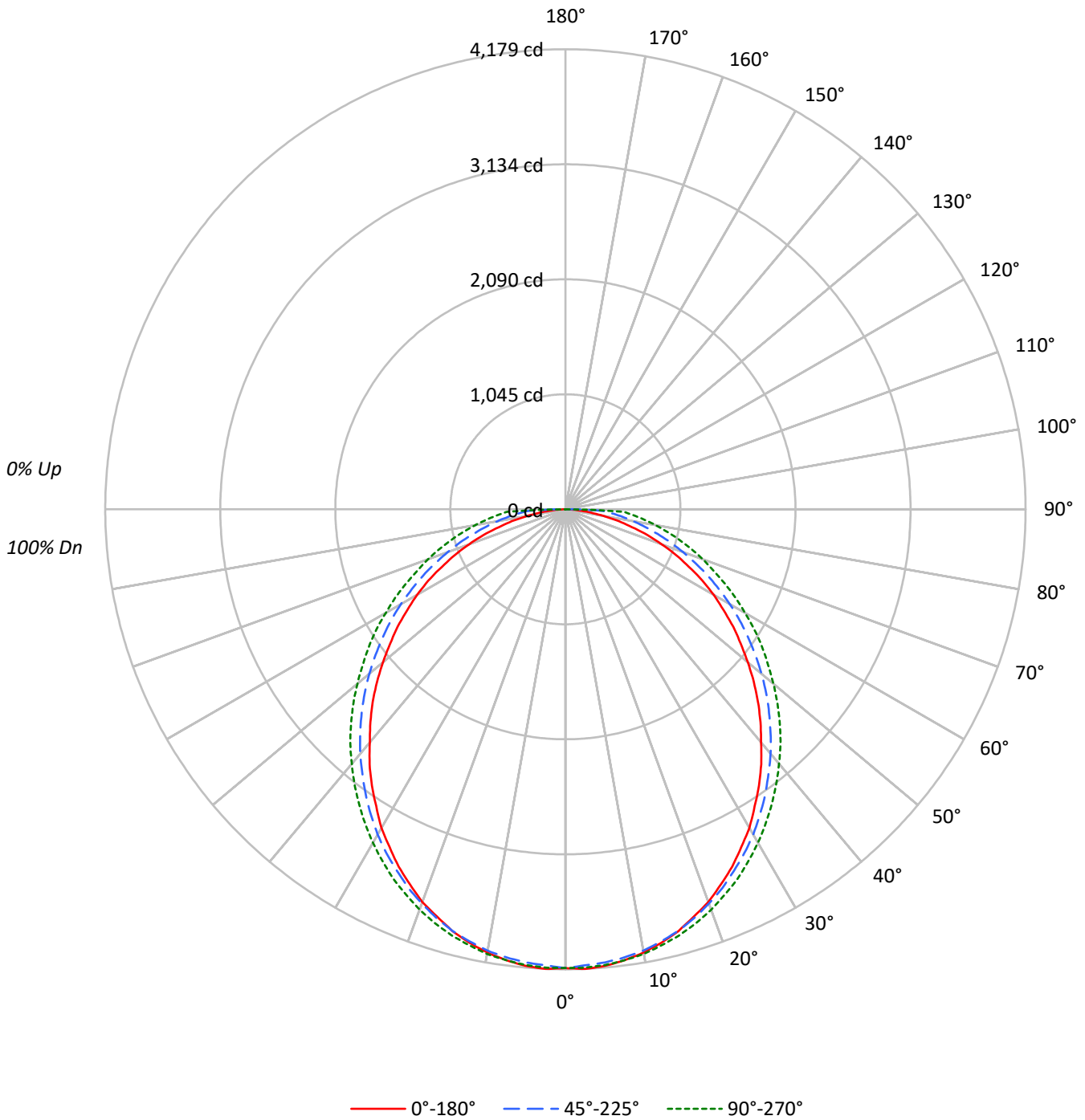
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11737.8 lumens
Efficiency: N/A
Efficacy: 114.0 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: 0.08')
CIE Type: Direct

Input Watts (W): 103
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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82				82
2	98	89	82	76	95	87	81	75	84	78	74	81	76	72	78	74	70	68				68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57				57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	56	51	49				49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42				42
6	69	56	47	40	68	55	46	40	53	45	40	51	45	39	50	44	39	37				37
7	64	51	42	36	63	50	41	36	48	41	35	47	40	35	46	39	35	33				33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29				29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26				26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24				24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13456	13456	13456
5°	13470	13293	13352
10°	13358	13152	13218
15°	13185	12954	13039
20°	12951	12703	12835
25°	12642	12411	12603
30°	12313	12120	12331
35°	11907	11764	12037
40°	11452	11406	11740
45°	11066	11007	11430
50°	10600	10596	11068
55°	10168	10147	10742
60°	9692	9696	10368
65°	9061	9212	10041
70°	8326	8673	9844
75°	7243	8205	9730
80°	5849	7868	9860
85°	3744	7929	10681



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	394.2	3.4
10°-20°	1121.6	9.6
20°-30°	1675.2	14.3
30°-40°	1981.2	16.9
40°-50°	2018.7	17.2
50°-60°	1808.9	15.4
60°-70°	1409.0	12.0
70°-80°	912.2	7.8
80°-90°	416.8	3.6
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°	3191.0	27.2
0°-40°	5172.2	44.1
0°-60°	8999.8	76.7
0°-90°	11737.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11737.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4167	4167	4167	4167	4167	
5°	4163	4156	4131	4156	4155	395
15°	3966	3966	3964	4001	4005	1117
25°	3582	3595	3622	3686	3702	1649
35°	3064	3094	3163	3248	3267	1915
45°	2474	2518	2616	2716	2753	1906
55°	1860	1912	2022	2139	2181	1660
65°	1239	1293	1426	1546	1596	1230
75°	626	706	867	1012	1071	671
85°	125	242	423	576	618	160
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4167.1	4167.1	4167.1	4167.1	4167.1
2.5°	4179.0	4171.8	4146.5	4168.7	4167.9
5°	4163.1	4156.0	4131.4	4156.0	4155.2
7.5°	4130.7	4128.3	4106.1	4133.0	4130.7
10°	4088.7	4085.5	4071.3	4098.2	4102.1
12.5°	4033.2	4031.6	4020.6	4052.2	4054.6
15°	3965.9	3965.9	3963.5	4000.8	4004.7
17.5°	3879.6	3890.7	3893.0	3933.4	3942.1
20°	3797.2	3800.4	3811.5	3860.6	3870.9
22.5°	3688.7	3702.1	3724.3	3778.2	3786.9
25°	3582.5	3595.2	3622.1	3686.3	3702.1
27.5°	3459.0	3483.5	3520.8	3584.9	3600.8
30°	3341.8	3362.3	3410.7	3482.0	3497.8
32.5°	3198.4	3233.2	3288.7	3363.9	3385.3
35°	3064.5	3093.8	3162.7	3248.3	3267.3
37.5°	2921.2	2956.0	3028.9	3120.0	3146.1
40°	2764.3	2815.0	2899.8	2990.9	3018.6
42.5°	2621.0	2667.7	2757.2	2860.2	2891.9
45°	2473.6	2518.0	2616.2	2716.0	2753.2
47.5°	2320.0	2365.9	2472.9	2579.0	2612.3
50°	2162.4	2217.0	2323.9	2435.6	2465.7
52.5°	2005.5	2060.2	2173.4	2285.1	2319.2
55°	1859.8	1912.1	2022.2	2138.6	2180.6
57.5°	1701.4	1756.8	1878.0	1990.5	2035.6
60°	1554.8	1595.2	1723.5	1840.0	1883.5
62.5°	1403.6	1447.1	1572.3	1691.9	1743.4
65°	1238.8	1292.7	1426.5	1546.1	1596.0
67.5°	1088.3	1139.8	1277.6	1412.3	1452.7
70°	932.3	991.7	1134.2	1272.1	1329.1
72.5°	783.4	845.1	1002.0	1139.0	1196.8
75°	625.7	705.7	867.3	1011.5	1070.9
77.5°	495.8	575.0	740.6	891.1	948.1
80°	351.7	449.1	628.1	780.2	830.9
82.5°	234.5	333.5	521.2	669.3	724.0
85°	125.1	241.6	423.0	575.8	617.8
87.5°	54.7	168.7	343.0	479.2	529.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)