

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: P685373

Luminaire Tested: **4CZL-16-UNV-N-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685373
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-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

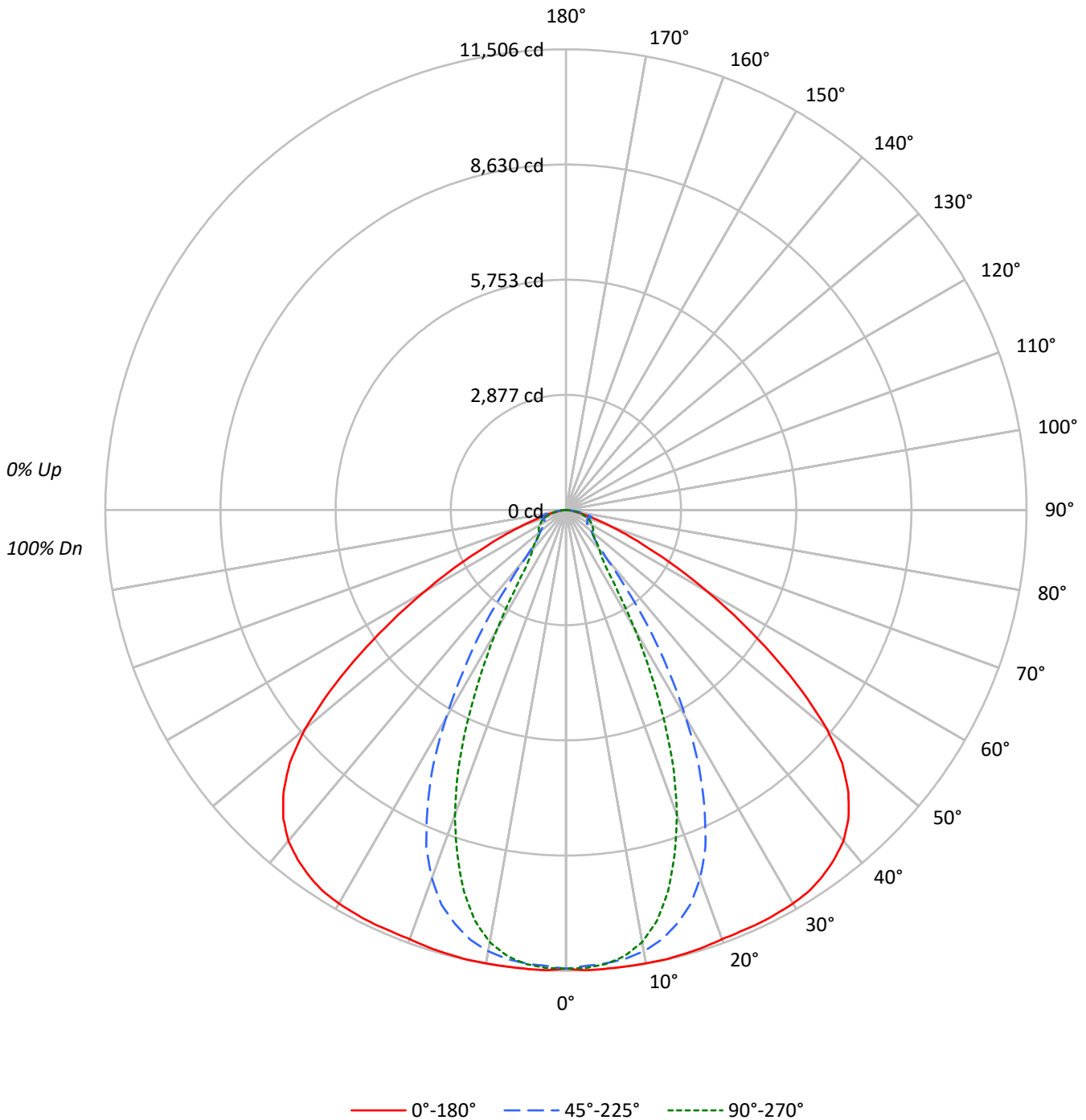
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16172.8 lumens
Efficiency: N/A
Efficacy: 157.0 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): 103
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

TEST NUMBER: P685373
CATALOG NUMBER: 4CZL-16-UNV-N-L840-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P685373
 CATALOG NUMBER: 4CZL-16-UNV-N-L840-CD-U

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°	36991	36991	36991
5°	37279	36849	36907
10°	37694	36693	35933
15°	38352	35785	32945
20°	39197	33652	27850
25°	40606	29166	20695
30°	42304	22339	12839
35°	44043	14441	6888
40°	45469	6723	5515
45°	45568	4561	4696
50°	42722	4179	4322
55°	35320	3765	4689
60°	26437	3971	4814
65°	17822	4540	5155
70°	11313	5536	5304
75°	6825	8247	5294
80°	4164	7360	4932
85°	2694	4768	3383



TEST NUMBER: P685373
 CATALOG NUMBER: 4CZL-16-UNV-N-L840-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1084.5	6.7
10°-20°	2994.0	18.5
20°-30°	3823.8	23.6
30°-40°	3101.4	19.2
40°-50°	2194.4	13.6
50°-60°	1429.2	8.8
60°-70°	877.7	5.4
70°-80°	521.3	3.2
80°-90°	146.5	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°	7902.3	48.9
0°-40°	11003.7	68.0
0°-60°	14627.3	90.4
0°-90°	16172.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16172.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	11455	11455	11455	11455	11455	
5°	11500	11476	11368	11414	11386	1097
15°	11472	11317	10704	10148	9854	3249
25°	11396	10456	8186	6364	5808	5269
35°	11172	7585	3663	1965	1747	6987
45°	9978	3818	999	1062	1028	7611
55°	6274	1286	669	781	833	5607
65°	2332	659	594	713	675	2423
75°	547	374	661	484	424	638
85°	73	145	129	115	91	102
90°	0	0	0	0	0	



TEST NUMBER: P685373

CATALOG NUMBER: 4CZL-16-UNV-N-L840-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	11455.3	11455.3	11455.3	11455.3	11455.3
2.5°	11506.4	11483.8	11396.4	11465.1	11445.5
5°	11500.5	11475.9	11367.9	11414.1	11385.6
7.5°	11496.6	11460.2	11307.0	11293.3	11234.4
10°	11495.6	11431.8	11190.2	11057.6	10958.4
12.5°	11497.6	11384.6	10998.6	10706.0	10504.6
15°	11472.0	11316.8	10704.0	10148.1	9854.5
17.5°	11448.5	11161.7	10332.8	9465.6	9024.6
20°	11406.2	11008.5	9792.6	8628.8	8104.4
22.5°	11394.4	10776.7	9110.0	7551.4	7031.9
25°	11396.4	10455.5	8185.9	6364.1	5808.2
27.5°	11374.8	10027.3	7179.2	5216.0	4558.0
30°	11345.3	9420.4	5990.9	3985.4	3443.3
32.5°	11293.3	8568.9	4774.0	2840.3	2390.5
35°	11172.5	7584.8	3663.3	1965.2	1747.2
37.5°	11004.5	6490.8	2470.0	1475.1	1439.8
40°	10786.5	5497.8	1594.9	1289.5	1308.2
42.5°	10448.7	4640.5	1164.8	1172.6	1174.6
45°	9978.2	3818.4	998.8	1061.7	1028.3
47.5°	9359.5	2998.4	907.5	925.1	920.2
50°	8504.1	2245.1	831.8	827.9	860.3
52.5°	7446.4	1660.7	754.3	787.7	848.5
55°	6273.7	1285.6	668.8	780.8	832.8
57.5°	5149.2	1042.0	619.7	761.1	791.6
60°	4093.4	868.2	614.8	724.8	745.4
62.5°	3162.4	744.4	611.9	707.1	715.0
65°	2332.5	659.0	594.2	713.0	674.7
67.5°	1699.0	631.5	580.4	703.2	621.7
70°	1198.2	554.9	586.3	649.2	561.8
72.5°	813.2	463.6	652.1	572.6	492.0
75°	547.0	374.2	661.0	484.2	424.3
77.5°	355.5	311.3	561.8	395.8	351.6
80°	223.9	259.3	395.8	304.5	265.2
82.5°	145.4	199.4	250.4	215.1	182.7
85°	72.7	145.4	128.7	114.9	91.3
87.5°	43.2	88.4	68.7	50.1	46.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)