

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: P685473

Luminaire Tested: **4CZL-16-UNV-M-L950-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685473
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-M-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT MEDIUM LENS MODEL @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

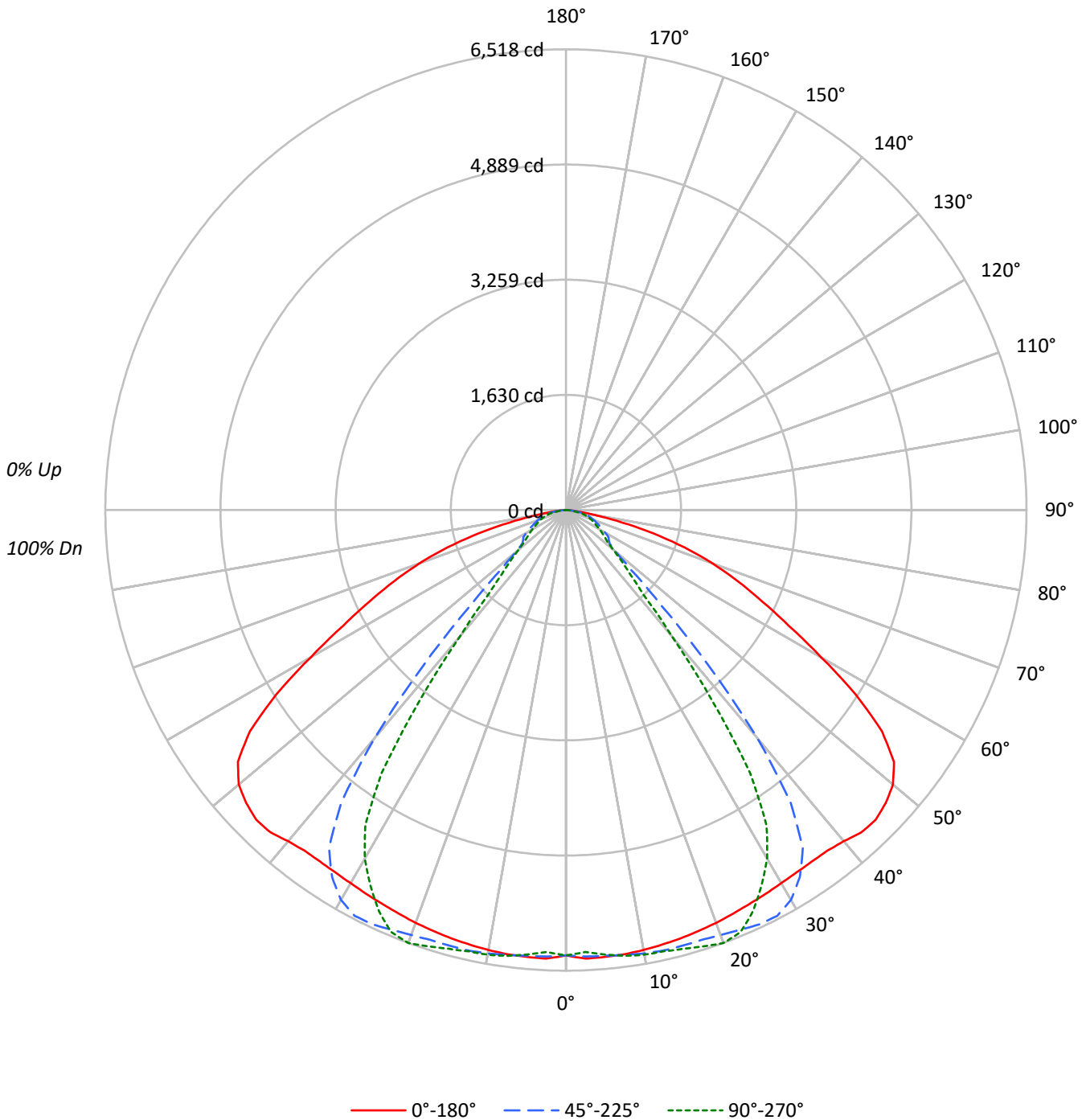
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13614.6 lumens
Efficiency: N/A
Efficacy: 132.2 lumens/watt
Spacing Criteria (0/90/45): 1.48 / 1.28 / 1.22
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 (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: P685473
CATALOG NUMBER: 4CZL-16-UNV-M-L950-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P685473
 CATALOG NUMBER: 4CZL-16-UNV-M-L950-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	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	90	90	90	88
2	103	96	90	86	100	94	89	85	91	87	83	88	84	81	85	82	79	79	79	79	77
3	95	86	80	74	93	85	79	73	82	77	72	79	75	71	77	73	70	70	70	70	68
4	88	78	71	65	86	77	70	64	74	68	64	72	67	63	70	66	62	62	62	62	60
5	82	71	63	57	80	70	63	57	68	61	56	66	60	56	64	59	55	55	55	55	53
6	76	65	57	51	75	64	56	51	62	55	51	61	55	50	59	54	50	50	50	50	48
7	71	59	51	46	70	59	51	46	57	50	46	56	50	45	54	49	45	45	45	45	43
8	67	55	47	42	65	54	47	41	53	46	41	51	45	41	50	45	41	41	41	41	39
9	63	50	43	38	61	50	43	38	49	42	38	48	42	37	47	41	37	37	37	37	36
10	59	47	39	35	58	46	39	35	45	39	34	44	38	34	44	38	34	34	34	34	33

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20349	20349	20349
5°	20577	20519	20461
10°	20727	20889	20947
15°	20973	21332	21481
20°	21358	21984	22399
25°	21906	23054	22315
30°	22730	23748	21228
35°	23925	23037	17926
40°	25784	17766	9805
45°	28308	8734	5859
50°	30354	4565	4370
55°	30741	4166	3771
60°	26959	4153	3555
65°	23460	3990	3443
70°	20819	4043	3465
75°	15970	4151	3518
80°	8128	4218	2912
85°	3205	2379	830



TEST NUMBER: P685473
 CATALOG NUMBER: 4CZL-16-UNV-M-L950-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	603.8	4.4
10°-20°	1799.6	13.2
20°-30°	2904.4	21.3
30°-40°	3401.5	25.0
40°-50°	2315.6	17.0
50°-60°	1340.8	9.8
60°-70°	766.6	5.6
70°-80°	394.5	2.9
80°-90°	87.9	0.6
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°	5307.8	39.0
0°-40°	8709.3	64.0
0°-60°	12365.6	90.8
0°-90°	13614.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13614.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6302	6302	6302	6302	6302	
5°	6348	6286	6330	6323	6312	605
15°	6273	6264	6381	6397	6426	1776
25°	6148	6235	6470	6371	6263	2846
35°	6069	6369	5844	4928	4547	3821
45°	6199	4612	1913	1288	1283	4762
55°	5460	1583	740	689	670	4758
65°	3070	565	522	461	451	3078
75°	1280	349	333	290	282	1361
85°	86	106	64	30	22	147
90°	0	0	0	0	0	



TEST NUMBER: P685473

CATALOG NUMBER: 4CZL-16-UNV-M-L950-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	6301.7	6301.7	6301.7	6301.7	6301.7	6301.7	6301.7	6301.7	6301.7	6301.7	6301.7
2.5°	6352.5	6334.6	6298.7	6283.8	6283.8	6322.6	6328.6	6304.7	6300.2	6279.4	6260.0
5°	6348.0	6330.1	6295.8	6282.3	6286.8	6330.1	6340.5	6321.1	6327.1	6321.1	6312.2
7.5°	6339.0	6319.6	6288.3	6279.4	6292.8	6348.0	6365.9	6355.4	6368.9	6365.9	6362.9
10°	6321.1	6306.2	6276.4	6274.9	6301.7	6370.4	6392.7	6379.3	6383.8	6382.3	6388.3
12.5°	6297.3	6283.8	6258.5	6271.9	6310.7	6383.8	6398.7	6377.8	6383.8	6385.3	6395.7
15°	6273.4	6257.0	6240.6	6271.9	6312.2	6380.8	6395.7	6392.7	6410.6	6412.1	6425.6
17.5°	6243.5	6233.1	6228.6	6270.4	6301.7	6377.8	6412.1	6430.0	6453.9	6459.9	6473.3
20°	6215.2	6206.3	6216.7	6262.9	6297.3	6397.2	6445.0	6471.8	6497.2	6504.6	6518.1
22.5°	6180.9	6174.9	6203.3	6252.5	6304.7	6427.1	6480.8	6483.7	6473.3	6453.9	6462.9
25°	6148.1	6148.1	6189.8	6249.5	6327.1	6470.3	6474.8	6389.8	6313.7	6262.9	6262.9
27.5°	6121.2	6127.2	6179.4	6262.9	6370.4	6473.3	6349.5	6180.9	6069.0	5995.9	5991.4
30°	6095.9	6106.3	6179.4	6300.2	6401.7	6368.9	6128.7	5924.3	5769.1	5699.0	5693.0
32.5°	6077.9	6094.4	6206.3	6356.9	6364.4	6158.5	5845.2	5587.1	5403.6	5299.2	5281.3
35°	6069.0	6088.4	6257.0	6406.2	6213.7	5843.7	5399.1	5000.8	4709.9	4575.6	4547.3
37.5°	6075.0	6109.3	6327.1	6364.4	5836.3	5224.6	4586.1	4014.7	3614.8	3488.0	3400.0
40°	6116.7	6174.9	6382.3	6024.2	5044.1	4214.6	3368.7	2754.0	2478.0	2387.0	2325.9
42.5°	6186.9	6245.0	6237.6	5245.5	3940.1	2994.2	2170.7	1802.2	1667.9	1653.0	1624.7
45°	6198.8	6221.2	5769.1	4226.5	2865.9	1912.6	1397.9	1289.0	1286.0	1296.5	1283.0
47.5°	6136.1	6092.9	5093.3	3232.9	1973.8	1236.8	1051.8	1069.7	1078.6	1071.2	1060.7
50°	6042.1	5882.5	4335.4	2376.6	1315.8	908.6	917.5	933.9	902.6	881.7	869.8
52.5°	5851.2	5540.9	3494.0	1684.3	910.1	775.8	847.4	799.7	754.9	743.0	741.5
55°	5460.3	5033.6	2688.4	1214.4	695.2	740.0	753.4	692.2	678.8	672.8	669.9
57.5°	4865.0	4402.6	2021.5	877.2	610.2	714.6	654.9	631.1	617.6	613.2	608.7
60°	4174.3	3696.9	1506.8	644.5	592.3	643.0	593.8	571.4	556.5	550.5	550.5
62.5°	3562.6	3059.9	1114.4	523.7	587.8	580.3	535.6	511.7	502.8	499.8	496.8
65°	3070.3	2461.6	804.1	484.9	549.0	522.2	478.9	462.5	456.5	450.6	450.6
67.5°	2631.7	1927.5	592.3	475.9	504.3	469.9	437.1	423.7	416.2	414.7	413.3
70°	2205.0	1420.3	450.6	465.5	478.9	428.2	396.8	380.4	371.5	367.0	367.0
72.5°	1756.0	974.2	359.5	428.2	438.6	378.9	347.6	335.7	328.2	323.7	322.2
75°	1280.0	611.7	316.3	359.5	377.4	332.7	301.4	290.9	287.9	283.5	282.0
77.5°	814.6	365.5	270.0	293.9	308.8	280.5	256.6	243.2	241.7	237.2	235.7
80°	437.1	234.2	216.3	231.2	240.2	226.8	198.4	171.6	164.1	158.1	156.6
82.5°	202.9	149.2	161.1	174.6	179.0	144.7	119.4	107.4	100.0	92.5	88.0
85°	86.5	80.6	100.0	107.4	88.0	64.2	41.8	31.3	25.4	23.9	22.4
87.5°	31.3	31.3	37.3	25.4	14.9	11.9	11.9	10.4	9.0	7.5	7.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)