

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: P685533

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

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685533
Test Lab: INNOVATION CENTER(G2)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-16-UNV-W-L950-CD-U
Description: METALUX CRUZE LINEAR 4FT WIDE LENS MODEL @90 CRI and 5000K
Light Source: (588) 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

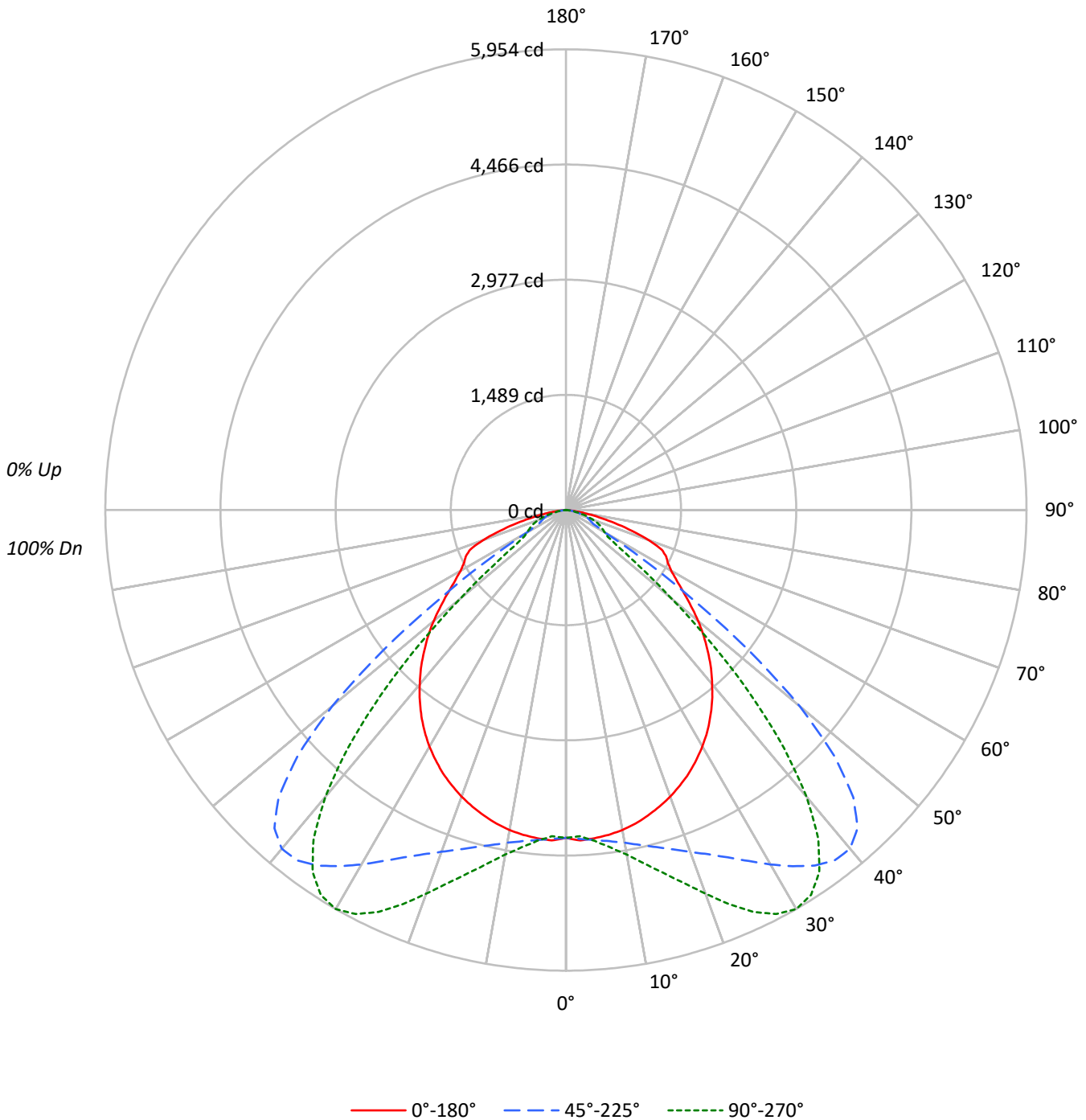
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13551.8 lumens
Efficiency: N/A
Efficacy: 131.6 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.69 / 1.65
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: P685533
CATALOG NUMBER: 4CZL-16-UNV-W-L950-CD-U

Luminous Intensity Polar Plot





TEST NUMBER: P685533
 CATALOG NUMBER: 4CZL-16-UNV-W-L950-CD-U

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	102	102	102	100
1	111	106	103	100	108	104	101	98	100	97	95	96	94	92	93	91	89	89	89	89	87
2	102	94	88	83	99	93	87	82	89	85	81	86	82	79	83	80	77	77	77	77	75
3	93	84	77	71	91	82	76	70	79	74	69	77	72	68	74	70	67	67	67	67	65
4	86	75	67	61	84	73	66	60	71	65	59	69	63	59	67	62	58	58	58	58	56
5	79	67	59	52	77	66	58	52	64	57	52	62	56	51	60	55	51	51	51	51	49
6	73	60	52	46	71	59	51	46	58	51	45	56	50	45	55	49	45	45	45	45	43
7	68	55	46	40	66	54	46	40	52	45	40	51	45	40	50	44	39	39	39	39	38
8	63	50	42	36	61	49	41	36	48	41	36	47	40	35	45	40	35	35	35	35	33
9	59	46	38	32	57	45	37	32	44	37	32	43	36	32	42	36	32	32	32	32	30
10	55	42	34	29	54	41	34	29	40	34	29	39	33	29	39	33	29	29	29	29	27

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13683	13683	13683
5°	13802	13874	13917
10°	13769	14319	14822
15°	13668	15077	16224
20°	13548	16151	18125
25°	13386	17649	20415
30°	13157	19722	22200
35°	12836	22105	22506
40°	12390	24085	20389
45°	11855	23993	15475
50°	11213	19829	8919
55°	10451	10907	4587
60°	10144	3806	3739
65°	10931	2769	3749
70°	10794	2838	3617
75°	8162	2482	2905
80°	4932	2027	2055
85°	2456	1037	437



TEST NUMBER: P685533
 CATALOG NUMBER: 4CZL-16-UNV-W-L950-CD-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	410.1	3.0
10°-20°	1275.2	9.4
20°-30°	2240.1	16.5
30°-40°	3112.1	23.0
40°-50°	3156.0	23.3
50°-60°	2025.3	14.9
60°-70°	947.3	7.0
70°-80°	328.5	2.4
80°-90°	57.3	0.4
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°	3925.4	29.0
0°-40°	7037.4	51.9
0°-60°	12218.8	90.2
0°-90°	13551.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13551.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4237	4237	4237	4237	4237	
5°	4258	4228	4280	4294	4293	405
15°	4088	4186	4510	4752	4853	1154
25°	3757	4142	4953	5533	5730	1729
35°	3256	4177	5608	5800	5709	2033
45°	2596	4471	5254	3919	3389	2001
55°	1856	4618	1937	933	815	1675
65°	1431	1476	362	454	491	1392
75°	654	226	199	229	233	708
85°	66	60	28	16	12	100
90°	0	0	0	0	0	



TEST NUMBER: P685533

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

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	4237.3	4237.3	4237.3	4237.3	4237.3	4237.3	4237.3	4237.3	4237.3	4237.3	4237.3
2.5°	4274.1	4260.8	4238.7	4229.9	4234.3	4256.4	4263.8	4247.6	4243.2	4231.4	4219.6
5°	4257.9	4246.1	4229.9	4227.0	4243.2	4280.0	4296.2	4291.8	4299.2	4300.6	4293.3
7.5°	4234.3	4224.0	4210.8	4224.0	4257.9	4316.8	4353.7	4365.5	4392.0	4397.9	4396.4
10°	4199.0	4190.1	4185.7	4219.6	4278.5	4366.9	4431.8	4464.2	4502.5	4515.7	4520.2
12.5°	4151.8	4143.0	4154.8	4213.7	4306.5	4433.2	4529.0	4586.5	4641.0	4669.0	4677.8
15°	4088.5	4085.5	4115.0	4209.3	4341.9	4509.8	4642.4	4732.3	4810.4	4841.3	4853.1
17.5°	4019.2	4020.7	4073.7	4207.8	4384.6	4599.7	4769.1	4897.3	4993.1	5037.3	5050.5
20°	3942.6	3947.0	4026.6	4206.3	4437.6	4699.9	4909.1	5077.1	5196.4	5255.3	5274.5
22.5°	3852.7	3861.6	3975.0	4207.8	4493.6	4814.8	5074.1	5274.5	5417.4	5488.1	5511.7
25°	3757.0	3770.2	3922.0	4215.2	4564.4	4953.3	5262.7	5497.0	5641.4	5703.2	5729.8
27.5°	3646.5	3668.6	3864.5	4225.5	4648.3	5113.9	5455.7	5681.1	5815.2	5862.3	5885.9
30°	3528.6	3553.7	3808.5	4246.1	4757.4	5289.2	5634.0	5824.0	5913.9	5940.4	5953.7
32.5°	3399.0	3440.2	3752.6	4280.0	4885.5	5458.7	5765.1	5878.6	5900.7	5891.8	5896.2
35°	3256.0	3300.2	3699.5	4336.0	5031.4	5607.5	5816.7	5816.7	5751.9	5712.1	5709.1
37.5°	3104.3	3160.3	3646.5	4400.8	5200.8	5706.2	5760.7	5614.8	5457.2	5371.7	5358.5
40°	2939.3	3014.4	3609.6	4489.2	5354.1	5713.5	5560.3	5259.8	4991.6	4853.1	4836.9
42.5°	2775.7	2868.6	3593.4	4604.1	5469.0	5578.0	5183.1	4719.1	4355.1	4191.6	4173.9
45°	2596.0	2718.3	3599.3	4761.8	5499.9	5253.9	4621.8	4020.7	3612.6	3406.3	3388.6
47.5°	2417.7	2569.5	3614.1	4940.0	5364.4	4704.3	3874.8	3179.4	2774.3	2557.7	2554.7
50°	2232.1	2429.5	3649.4	5085.9	4997.5	3947.0	2957.0	2277.8	1953.6	1788.6	1775.4
52.5°	2039.1	2307.2	3726.0	5112.4	4344.8	2974.6	2006.7	1520.5	1309.8	1205.2	1184.6
55°	1856.4	2204.1	3851.3	4873.8	3406.3	1937.4	1264.1	959.1	853.1	810.3	814.7
57.5°	1698.7	2127.5	3997.1	4250.5	2211.5	1140.4	732.2	637.9	635.0	639.4	640.9
60°	1570.6	2080.3	4061.9	3188.3	1214.0	589.3	511.2	531.9	559.9	576.1	579.0
62.5°	1486.6	2055.3	3864.5	1847.5	539.2	411.1	446.4	484.7	517.1	531.9	533.3
65°	1430.6	1989.0	3161.7	913.5	330.0	362.4	406.6	446.4	475.9	487.7	490.6
67.5°	1343.7	1801.9	2167.3	378.6	290.2	327.1	369.8	408.1	433.2	442.0	443.5
70°	1143.3	1508.7	1259.7	251.9	262.3	300.6	334.4	363.9	380.1	384.5	383.1
72.5°	892.8	1194.9	636.5	228.4	243.1	263.7	282.9	299.1	307.9	312.3	312.3
75°	654.2	873.7	299.1	201.8	181.2	198.9	218.1	228.4	231.3	232.8	232.8
77.5°	439.1	602.6	178.3	156.2	140.0	154.7	162.1	157.6	154.7	157.6	157.6
80°	265.2	371.3	156.2	113.4	107.6	109.0	103.1	103.1	109.0	112.0	110.5
82.5°	142.9	210.7	137.0	82.5	72.2	66.3	64.8	61.9	58.9	57.5	57.5
85°	66.3	107.6	88.4	50.1	38.3	28.0	22.1	16.2	14.7	11.8	11.8
87.5°	26.5	41.3	26.5	16.2	8.8	5.9	4.4	2.9	1.5	1.5	1.5
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)