

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: P685790

Luminaire Tested: **4CZL-7-UNV-M-LVR-L840-CD-U**

Issue Date: 05/10/2023



Test Information

Test Method: LM-79-08
Report Number: P685790
Test Lab: INNOVATION CENTER(G3)
Issue Date: 05/10/2023
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 4CZL-7-UNV-M-LVR-L840-CD-U
Description: METALUX CRUZE LINEAR 4FT LOUVER MODEL WITH MEDIUM LENS @80 CRI and 4000K
Light Source: (392) 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

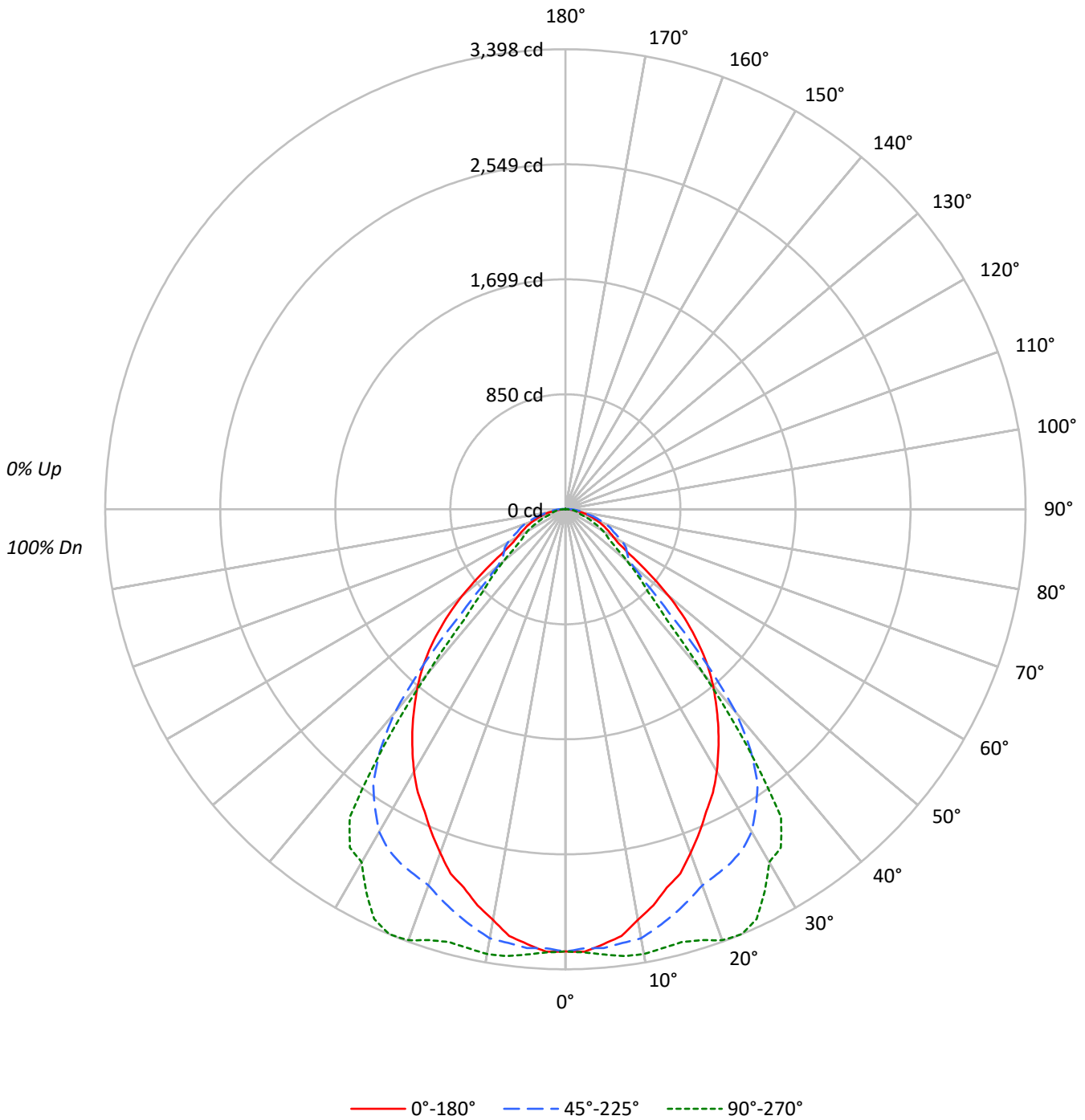
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6042.7 lumens
Efficiency: N/A
Efficacy: 137.3 lumens/watt
Spacing Criteria (0/90/45): 1.05 / 1.34 / 1.2
Luminous Opening: Rectangular (W 0.83' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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: P685790
CATALOG NUMBER: 4CZL-7-UNV-M-LVR-L840-CD-U

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	90	88
2	103	96	90	86	100	94	89	84	91	86	83	87	84	81	84	81	79	77
3	95	87	80	74	93	85	79	74	82	77	72	79	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	70	66	62	60
5	83	72	64	58	81	70	63	58	68	62	57	67	61	57	65	60	56	54
6	77	65	58	52	75	65	57	52	63	56	51	61	55	51	60	55	51	49
7	72	60	53	47	70	59	52	47	58	51	47	57	51	46	55	50	46	44
8	68	56	48	43	66	55	48	43	54	47	42	52	47	42	51	46	42	40
9	64	52	44	39	62	51	44	39	50	43	39	49	43	39	48	42	39	37
10	60	48	41	36	59	47	41	36	46	40	36	46	40	36	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10548	10548	10548
5°	10450	10544	10702
10°	10096	10550	10936
15°	9672	10354	11064
20°	9281	10157	11640
25°	8769	10278	11898
30°	8335	10255	11222
35°	7761	9752	10943
40°	7144	8266	6668
45°	6294	4927	3953
50°	4997	3272	2983
55°	3235	3113	2264
60°	2641	3163	2080
65°	2516	2981	1699
70°	2389	2992	1344
75°	2269	2801	1249
80°	2100	2646	1402
85°	1878	3235	1719



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	310.0	5.1
10°-20°	879.2	14.6
20°-30°	1325.9	21.9
30°-40°	1465.0	24.2
40°-50°	918.6	15.2
50°-60°	494.5	8.2
60°-70°	335.9	5.6
70°-80°	200.6	3.3
80°-90°	87.2	1.4
90°-100°	19.1	0.3
100°-110°	2.2	0.0
110°-120°	0.8	0.0
120°-130°	0.8	0.0
130°-140°	0.9	0.0
140°-150°	0.8	0.0
150°-160°	0.6	0.0
160°-170°	0.5	0.0
170°-180°	0.2	0.0
0°-30°	2515.1	41.6
0°-40°	3980.1	65.9
0°-60°	5393.2	89.3
0°-90°	6016.8	99.6
90°-120°	22.2	0.4
90°-150°	24.6	0.4
90°-180°	26.0	0.4
0°-180°	6042.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3266	3266	3266	3266	3266	
5°	3224	3230	3253	3291	3302	304
15°	2893	2994	3097	3247	3310	817
25°	2461	2611	2884	3192	3339	1136
35°	1969	2200	2474	2661	2776	1229
45°	1378	1501	1079	880	866	1051
55°	575	601	553	478	402	558
65°	329	362	390	317	222	326
75°	182	202	224	184	100	192
85°	51	62	87	115	46	55
90°	1	19	44	74	14	4
95°	0	3	18	38	7	0
105°	0	1	1	3	1	0
115°	0	1	1	1	1	0
125°	0	1	1	1	1	0
135°	1	1	1	1	1	1
145°	1	1	1	1	2	1
155°	1	1	1	1	1	1
165°	1	2	2	2	2	0
175°	2	2	2	2	2	0
180°	2	2	2	2	2	



TEST NUMBER: P685790

CATALOG NUMBER: 4CZL-7-UNV-M-LVR-L840-CD-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3266.5	3266.5	3266.5	3266.5	3266.5
2.5°	3270.8	3261.8	3245.2	3275.0	3275.5
5°	3223.9	3229.5	3252.9	3291.2	3301.5
7.5°	3178.4	3199.7	3231.2	3323.6	3328.3
10°	3079.1	3123.4	3217.5	3306.6	3335.1
12.5°	2996.5	3062.1	3159.2	3276.3	3320.6
15°	2893.0	2994.4	3097.0	3246.9	3309.5
17.5°	2820.6	2901.9	3027.6	3233.3	3336.0
20°	2700.9	2815.5	2955.6	3242.7	3387.1
22.5°	2584.6	2723.9	2919.4	3246.1	3397.7
25°	2461.1	2610.6	2884.5	3192.0	3339.4
27.5°	2358.9	2484.1	2832.5	3079.1	3185.6
30°	2235.3	2382.7	2750.3	2906.6	3009.7
32.5°	2102.4	2289.4	2617.0	2774.6	2962.0
35°	1968.7	2200.0	2473.9	2661.3	2775.8
37.5°	1829.0	2126.3	2249.0	2279.2	2200.8
40°	1694.8	2023.6	1961.0	1668.4	1581.9
42.5°	1548.3	1803.0	1529.5	1147.9	1109.1
45°	1378.3	1500.6	1078.9	879.6	865.5
47.5°	1197.3	1162.0	804.6	735.2	727.1
50°	994.6	929.0	651.3	648.7	593.8
52.5°	775.2	737.7	584.0	562.7	475.3
55°	574.6	601.0	552.9	478.3	402.1
57.5°	460.0	521.3	531.1	417.8	359.5
60°	408.9	456.2	489.8	384.2	322.0
62.5°	366.7	404.2	438.7	356.5	277.7
65°	329.3	362.0	390.2	316.9	222.3
67.5°	289.6	323.7	358.2	272.2	189.1
70°	253.0	289.2	316.9	241.5	142.3
72.5°	215.1	252.6	264.9	201.9	113.7
75°	181.9	202.3	224.5	184.4	100.1
77.5°	146.9	164.4	173.4	169.1	88.2
80°	112.9	126.9	142.3	153.8	75.4
82.5°	82.6	92.9	113.7	135.4	60.5
85°	50.7	62.2	87.3	115.0	46.4
87.5°	22.6	37.1	64.3	95.0	29.8
90°	1.3	19.2	44.3	73.7	13.6
92.5°	0.4	8.5	29.0	54.5	9.4
95°	0.4	3.0	17.5	37.9	6.8
97.5°	0.4	1.3	9.8	24.3	4.3
100°	0.4	0.9	4.7	14.1	3.0
102.5°	0.4	0.9	2.1	6.8	2.1
105°	0.4	0.9	1.3	3.0	1.3
107.5°	0.4	0.9	0.9	1.3	0.9
110°	0.4	0.9	0.9	0.9	0.9



TEST NUMBER: P685790
 CATALOG NUMBER: 4CZL-7-UNV-M-LVR-L840-CD-U

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0.4	0.9	0.9	0.9	0.9
115°	0.4	0.9	0.9	0.9	0.9
117.5°	0.4	0.9	0.9	0.9	0.9
120°	0.4	0.9	0.9	0.9	0.9
122.5°	0.4	0.9	0.9	0.9	0.9
125°	0.4	0.9	0.9	0.9	0.9
127.5°	0.4	0.9	0.9	0.9	0.9
130°	0.4	0.9	0.9	0.9	0.9
132.5°	0.9	0.9	1.3	1.3	1.3
135°	0.9	0.9	1.3	1.3	1.3
137.5°	0.9	1.3	1.3	1.3	1.3
140°	0.9	1.3	1.3	1.3	1.3
142.5°	0.9	1.3	1.3	1.3	1.3
145°	0.9	1.3	1.3	1.3	1.7
147.5°	0.9	1.3	1.3	1.3	1.7
150°	0.9	1.3	1.3	1.3	1.3
152.5°	1.3	1.3	1.3	1.3	1.3
155°	1.3	1.3	1.3	1.3	1.3
157.5°	1.3	1.3	1.3	1.7	1.7
160°	1.3	1.7	1.7	1.7	1.7
162.5°	1.3	1.7	1.7	1.7	1.7
165°	1.3	1.7	1.7	1.7	1.7
167.5°	1.3	1.7	1.7	1.7	2.1
170°	1.7	1.7	1.7	2.1	2.1
172.5°	1.7	1.7	1.7	2.1	2.1
175°	1.7	1.7	1.7	2.1	2.1
177.5°	1.7	2.1	1.7	2.1	2.6
180°	2.1	2.1	2.1	2.1	2.1

(END OF REPORT)