

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: P474847

Luminaire Tested: **22CZ2-110VHE-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474847  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-110VHE-UNV-L840-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11229.0 lumens  
Efficiency: N/A  
Efficacy: 133.5 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

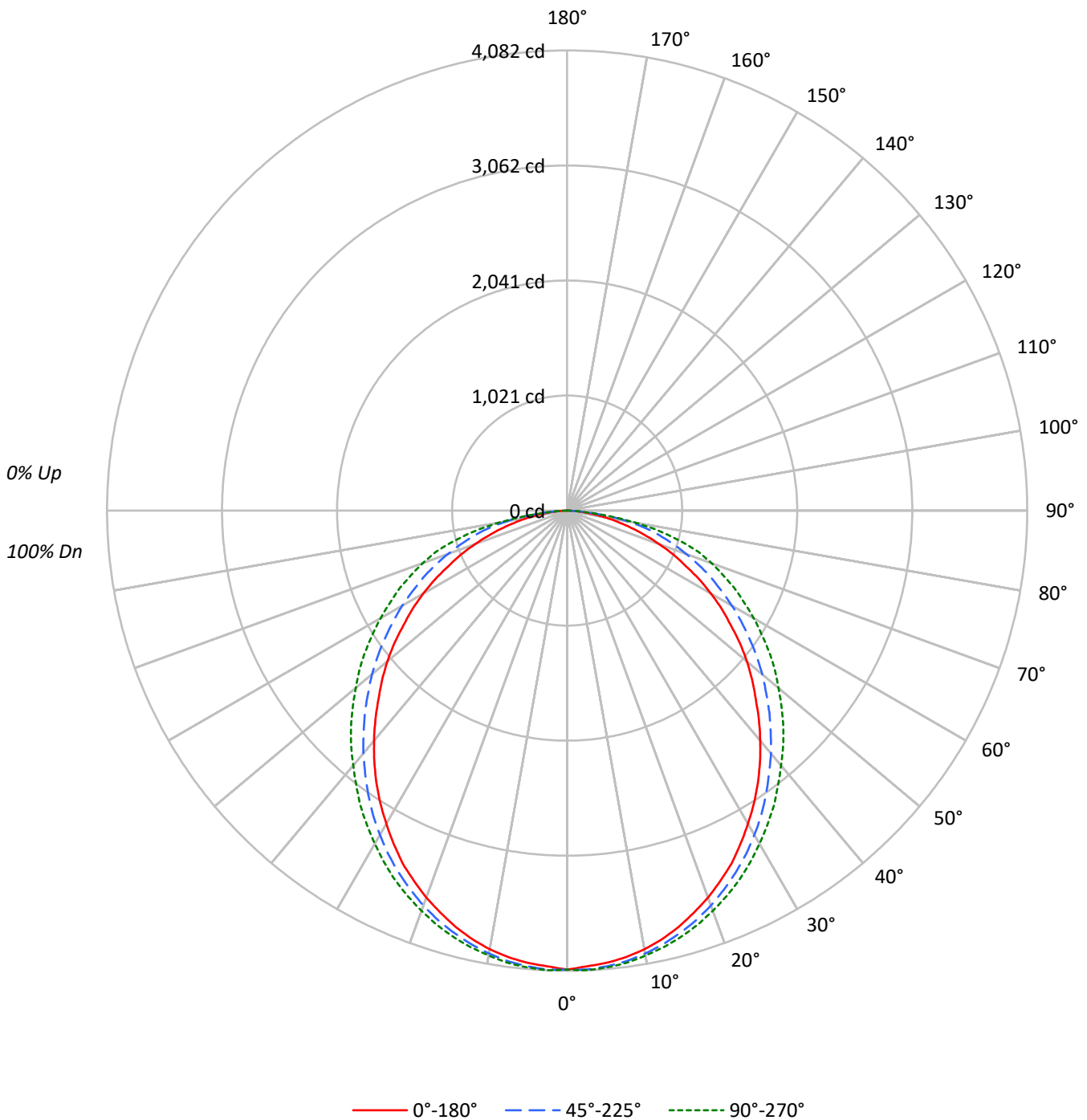
Input Watts (W): 84.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### 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	109	104	99	95	106	101	97	94	97	94	91		93	91	88		90	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75		81	77	73		78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63		72	66	61		69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53		64	58	53		62	56	52	50
5	76	63	54	47	73	62	53	47	59	52	46		57	51	46		56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36		47	41	36		46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32		43	37	32		42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29		40	33	29		39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26		37	31	26		36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10958	10958	10958
5°	10878	10962	10987
10°	10797	10900	10952
15°	10651	10803	10902
20°	10459	10676	10819
25°	10252	10513	10731
30°	9969	10323	10604
35°	9690	10103	10501
40°	9362	9878	10370
45°	9004	9654	10322
50°	8713	9458	10242
55°	8306	9252	10265
60°	7931	9093	10294
65°	7374	8975	10457
70°	6815	8850	10717
75°	6094	8808	10782
80°	5112	8348	9414
85°	3955	5715	5348



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	384.7	3.4
10°-20°	1092.2	9.7
20°-30°	1628.5	14.5
30°-40°	1922.4	17.1
40°-50°	1959.3	17.4
50°-60°	1766.9	15.7
60°-70°	1388.8	12.4
70°-80°	869.5	7.7
80°-90°	216.8	1.9
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°	3105.3	27.7
0°-40°	5027.7	44.8
0°-60°	8753.9	78.0
0°-90°	11229.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11229.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4072	4072	4072	4072	4072	
5°	4027	4037	4058	4067	4067	382
15°	3823	3840	3878	3906	3913	1077
25°	3453	3479	3541	3595	3614	1587
35°	2950	2988	3076	3161	3196	1843
45°	2366	2418	2537	2660	2712	1830
55°	1770	1825	1972	2124	2188	1589
65°	1158	1229	1410	1566	1642	1155
75°	586	674	847	999	1037	622
85°	128	164	185	185	173	155
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4072.2	4072.2	4072.2	4072.2	4072.2
2.5°	4046.1	4055.6	4074.6	4081.7	4081.7
5°	4027.1	4036.6	4058.0	4067.4	4067.4
7.5°	3996.3	4005.7	4031.9	4043.7	4046.1
10°	3951.2	3963.0	3989.1	4008.1	4008.1
12.5°	3894.2	3906.1	3939.3	3963.0	3965.4
15°	3823.0	3839.6	3877.6	3906.1	3913.2
17.5°	3740.0	3766.1	3808.8	3844.4	3851.5
20°	3652.2	3678.3	3728.1	3768.4	3777.9
22.5°	3554.9	3578.6	3637.9	3687.8	3699.6
25°	3452.8	3478.9	3540.6	3595.2	3614.2
27.5°	3331.8	3362.6	3436.2	3497.9	3516.9
30°	3208.4	3246.4	3322.3	3391.1	3412.5
32.5°	3082.6	3118.2	3203.6	3277.2	3305.7
35°	2949.7	2987.7	3075.5	3160.9	3196.5
37.5°	2809.7	2847.7	2942.6	3039.9	3073.1
40°	2665.0	2710.0	2812.1	2916.5	2952.1
42.5°	2517.8	2565.3	2672.1	2788.4	2835.8
45°	2366.0	2418.2	2536.8	2660.2	2712.4
47.5°	2228.3	2271.0	2394.4	2529.7	2579.5
50°	2081.2	2121.5	2259.2	2394.4	2446.6
52.5°	1931.7	1969.7	2116.8	2259.2	2323.2
55°	1770.3	1824.9	1972.0	2123.9	2188.0
57.5°	1627.9	1677.8	1829.6	1983.9	2045.6
60°	1473.7	1525.9	1689.6	1846.3	1912.7
62.5°	1319.4	1376.4	1542.5	1711.0	1772.7
65°	1158.1	1229.3	1409.6	1566.2	1642.2
67.5°	1020.4	1089.2	1267.2	1431.0	1497.4
70°	866.2	946.9	1124.8	1291.0	1362.1
72.5°	721.4	802.1	984.8	1150.9	1222.1
75°	586.1	674.0	847.2	999.1	1037.0
77.5°	455.6	538.7	711.9	799.7	840.1
80°	329.9	410.5	538.7	598.0	607.5
82.5°	223.1	291.9	365.5	382.1	372.6
85°	128.1	163.7	185.1	185.1	173.2
87.5°	52.2	52.2	45.1	28.5	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)