

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: P474934

Luminaire Tested: **22CZ2-110VHE-S-UNV-L835-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474934
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-110VHE-S-UNV-L835-CD1-U
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11241.0 lumens
Efficiency: N/A
Efficacy: 133.7 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

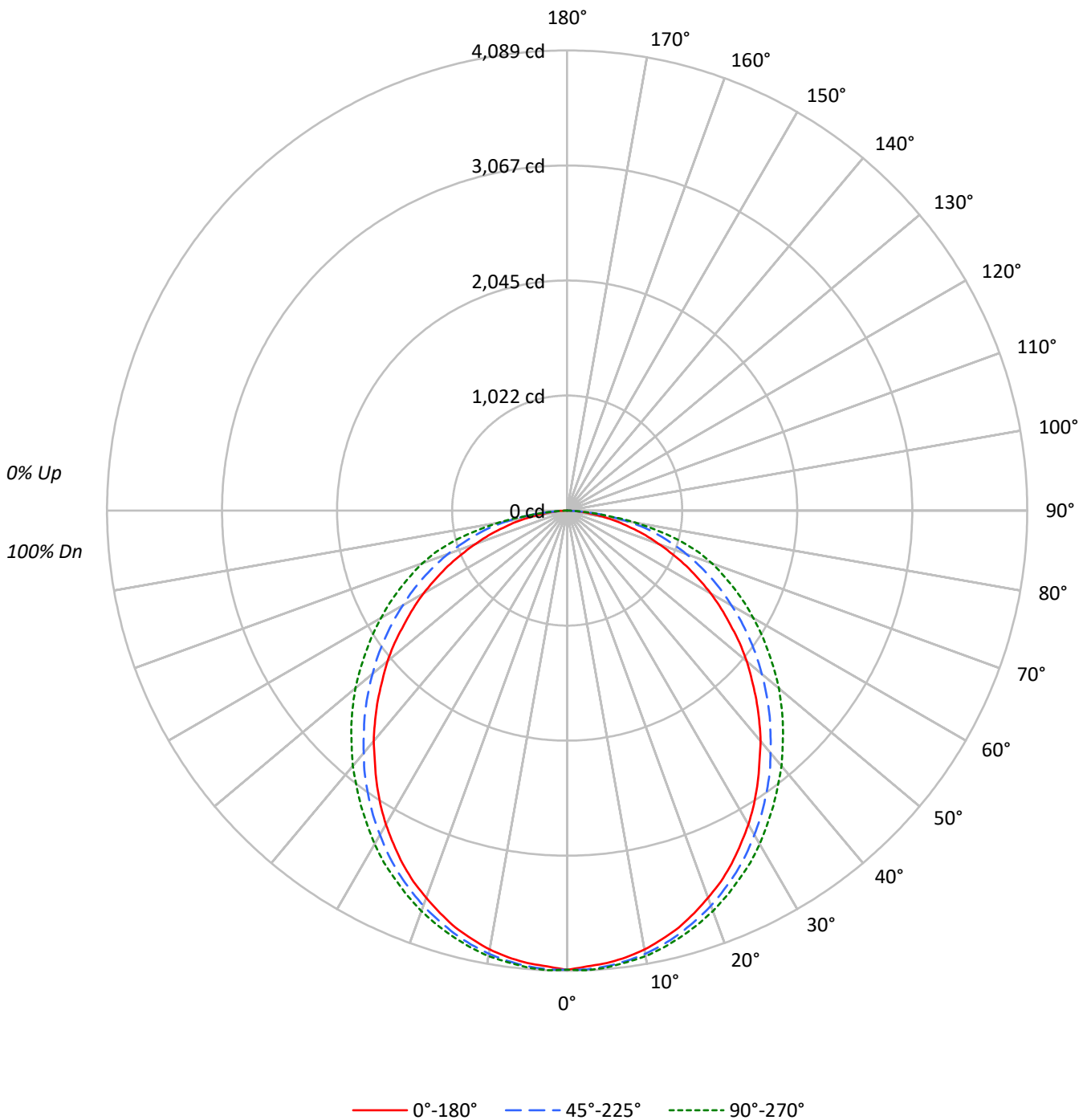
Input Watts (W): 84.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474934

CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L835-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474934

CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L835-CD1-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	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	88	86	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	74	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	32	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10981	10981	10981
5°	10905	10978	11008
10°	10823	10927	10986
15°	10686	10830	10921
20°	10486	10704	10844
25°	10274	10541	10734
30°	10008	10338	10634
35°	9696	10125	10500
40°	9394	9881	10406
45°	9048	9669	10322
50°	8724	9453	10284
55°	8308	9266	10236
60°	7935	9077	10278
65°	7448	8972	10427
70°	6807	8861	10766
75°	6109	8796	10776
80°	5143	8305	9569
85°	3863	5629	5209



TEST NUMBER: P474934

CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L835-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	385.4	3.4
10°-20°	1094.6	9.7
20°-30°	1631.9	14.5
30°-40°	1925.6	17.1
40°-50°	1961.9	17.5
50°-60°	1769.3	15.7
60°-70°	1389.5	12.4
70°-80°	868.7	7.7
80°-90°	214.1	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°	3111.9	27.7
0°-40°	5037.5	44.8
0°-60°	8768.7	78.0
0°-90°	11241.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11241.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4080	4080	4080	4080	4080	
5°	4037	4045	4064	4072	4075	383
15°	3836	3849	3887	3915	3920	1080
25°	3460	3479	3550	3602	3615	1592
35°	2952	2992	3082	3166	3196	1846
45°	2378	2418	2541	2663	2712	1834
55°	1771	1828	1975	2127	2182	1588
65°	1170	1232	1409	1567	1638	1155
75°	588	669	846	990	1036	628
85°	125	160	182	180	169	152
90°	0	0	0	0	0	



TEST NUMBER: P474934

CATALOG NUMBER: 22CZ2-110VHE-S-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4080.5	4080.5	4080.5	4080.5	4080.5
2.5°	4053.3	4061.5	4080.5	4088.7	4088.7
5°	4037.0	4045.1	4064.2	4072.3	4075.1
7.5°	4004.3	4015.2	4037.0	4047.8	4047.8
10°	3960.8	3974.4	3998.9	4015.2	4020.6
12.5°	3901.0	3917.3	3949.9	3969.0	3974.4
15°	3835.7	3849.3	3887.4	3914.6	3920.0
17.5°	3751.3	3773.1	3813.9	3849.3	3857.4
20°	3661.6	3686.0	3737.7	3778.5	3786.7
22.5°	3569.1	3588.1	3645.2	3694.2	3705.1
25°	3460.3	3479.3	3550.0	3601.7	3615.3
27.5°	3340.6	3373.2	3443.9	3503.8	3525.5
30°	3220.9	3253.5	3327.0	3397.7	3422.2
32.5°	3090.3	3125.7	3210.0	3283.4	3307.9
35°	2951.6	2992.4	3082.1	3166.5	3196.4
37.5°	2807.4	2853.6	2954.3	3044.0	3076.7
40°	2674.1	2706.7	2812.8	2916.2	2962.4
42.5°	2524.5	2568.0	2674.1	2791.1	2834.6
45°	2377.6	2418.4	2540.8	2663.2	2712.2
47.5°	2225.2	2276.9	2399.3	2535.3	2584.3
50°	2083.8	2127.3	2257.9	2402.1	2456.5
52.5°	1931.4	1977.7	2119.1	2268.8	2317.7
55°	1770.9	1828.1	1975.0	2127.3	2181.7
57.5°	1624.0	1678.4	1833.5	1991.3	2048.4
60°	1474.4	1528.8	1686.6	1847.1	1909.7
62.5°	1316.6	1379.2	1550.6	1705.6	1776.4
65°	1169.7	1232.3	1409.1	1566.9	1637.6
67.5°	1014.7	1088.1	1265.0	1430.9	1501.6
70°	865.1	952.1	1126.2	1289.4	1368.3
72.5°	731.8	802.5	984.8	1156.1	1221.4
75°	587.6	669.2	846.0	990.2	1036.4
77.5°	465.2	535.9	704.6	799.8	829.7
80°	331.9	410.8	535.9	593.0	617.5
82.5°	220.3	285.6	364.5	375.4	370.0
85°	125.1	160.5	182.3	179.5	168.7
87.5°	49.0	54.4	40.8	24.5	19.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)