

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: P474646

Luminaire Tested: **24CZ2-110VHE-SQR-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474646
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-110VHE-SQR-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10487.7 lumens
Efficiency: N/A
Efficacy: 136.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

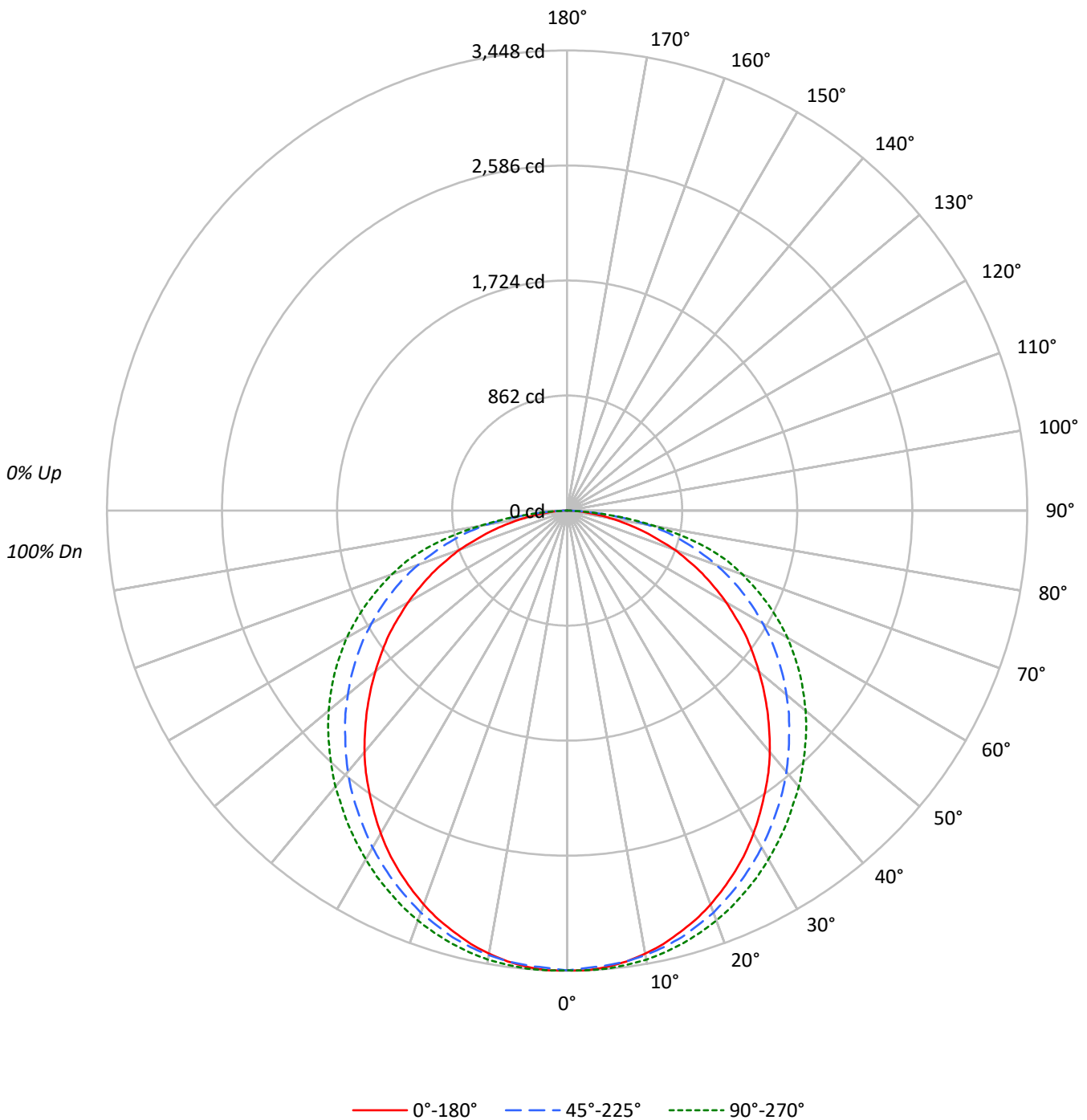
Input Watts (W): 77
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9270	9270	9270
5°	9269	9242	9306
10°	9212	9244	9335
15°	9112	9224	9350
20°	8997	9179	9361
25°	8850	9114	9363
30°	8679	9059	9377
35°	8482	9005	9412
40°	8299	8976	9488
45°	8072	8952	9590
50°	7856	8979	9764
55°	7672	9040	9983
60°	7413	9108	10262
65°	7116	9217	10572
70°	6750	9346	10995
75°	6045	9477	11358
80°	5089	9503	10308
85°	3776	7191	6777



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	326.5	3.1
10°-20°	935.6	8.9
20°-30°	1416.3	13.5
30°-40°	1713.3	16.3
40°-50°	1808.5	17.2
50°-60°	1705.5	16.3
60°-70°	1406.0	13.4
70°-80°	922.4	8.8
80°-90°	253.6	2.4
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°	2678.3	25.5
0°-40°	4391.7	41.9
0°-60°	7905.6	75.4
0°-90°	10487.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10487.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3445	3445	3445	3445	3445	
5°	3432	3432	3421	3445	3445	326
15°	3271	3289	3311	3349	3356	923
25°	2981	3018	3070	3133	3153	1373
35°	2582	2649	2741	2835	2865	1616
45°	2121	2217	2352	2478	2520	1637
55°	1635	1751	1927	2071	2128	1457
65°	1118	1252	1448	1602	1660	1104
75°	581	730	912	1056	1092	614
85°	122	211	233	226	220	152
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3444.9	3444.9	3444.9	3444.9	3444.9
2.5°	3448.2	3444.9	3429.8	3449.9	3448.2
5°	3431.5	3431.5	3421.4	3444.9	3444.9
7.5°	3408.0	3409.7	3406.3	3433.1	3433.1
10°	3371.1	3377.8	3382.9	3413.0	3416.4
12.5°	3327.6	3339.3	3349.4	3386.2	3389.6
15°	3270.6	3289.0	3310.8	3349.4	3356.1
17.5°	3212.0	3233.7	3257.2	3307.5	3315.8
20°	3141.6	3166.7	3205.3	3255.5	3268.9
22.5°	3062.8	3098.0	3138.2	3198.6	3215.3
25°	2980.7	3017.6	3069.5	3133.2	3153.3
27.5°	2891.9	2935.5	2994.1	3067.9	3089.7
30°	2793.1	2843.3	2915.4	2994.1	3017.6
32.5°	2689.2	2747.8	2828.3	2915.4	2942.2
35°	2582.0	2649.0	2741.1	2835.0	2865.1
37.5°	2476.4	2543.4	2652.3	2751.2	2779.7
40°	2362.5	2436.2	2555.2	2660.7	2700.9
42.5°	2241.8	2329.0	2454.6	2571.9	2610.5
45°	2121.2	2216.7	2352.4	2478.1	2520.0
47.5°	1998.9	2104.4	2253.6	2380.9	2429.5
50°	1876.6	1988.8	2144.7	2282.1	2332.3
52.5°	1752.6	1869.9	2039.1	2184.9	2230.1
55°	1635.3	1750.9	1926.8	2070.9	2127.9
57.5°	1499.6	1630.3	1816.3	1962.0	2017.3
60°	1377.3	1504.6	1692.3	1846.4	1906.7
62.5°	1244.9	1375.6	1573.3	1727.5	1786.1
65°	1117.6	1251.6	1447.6	1601.8	1660.4
67.5°	980.2	1120.9	1322.0	1471.1	1528.1
70°	857.9	990.2	1187.9	1340.4	1397.4
72.5°	708.7	859.5	1048.9	1199.7	1261.7
75°	581.4	730.5	911.5	1055.6	1092.4
77.5°	447.4	596.5	775.8	869.6	894.7
80°	328.4	469.1	613.2	663.5	665.2
82.5°	221.2	345.2	427.3	452.4	449.0
85°	122.3	211.1	232.9	226.2	219.5
87.5°	50.3	70.4	57.0	40.2	31.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)