

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: P474598

Luminaire Tested: **24CZ2-120VHE-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474598
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-120VHE-SQR-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10981.5 lumens
Efficiency: N/A
Efficacy: 130.4 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

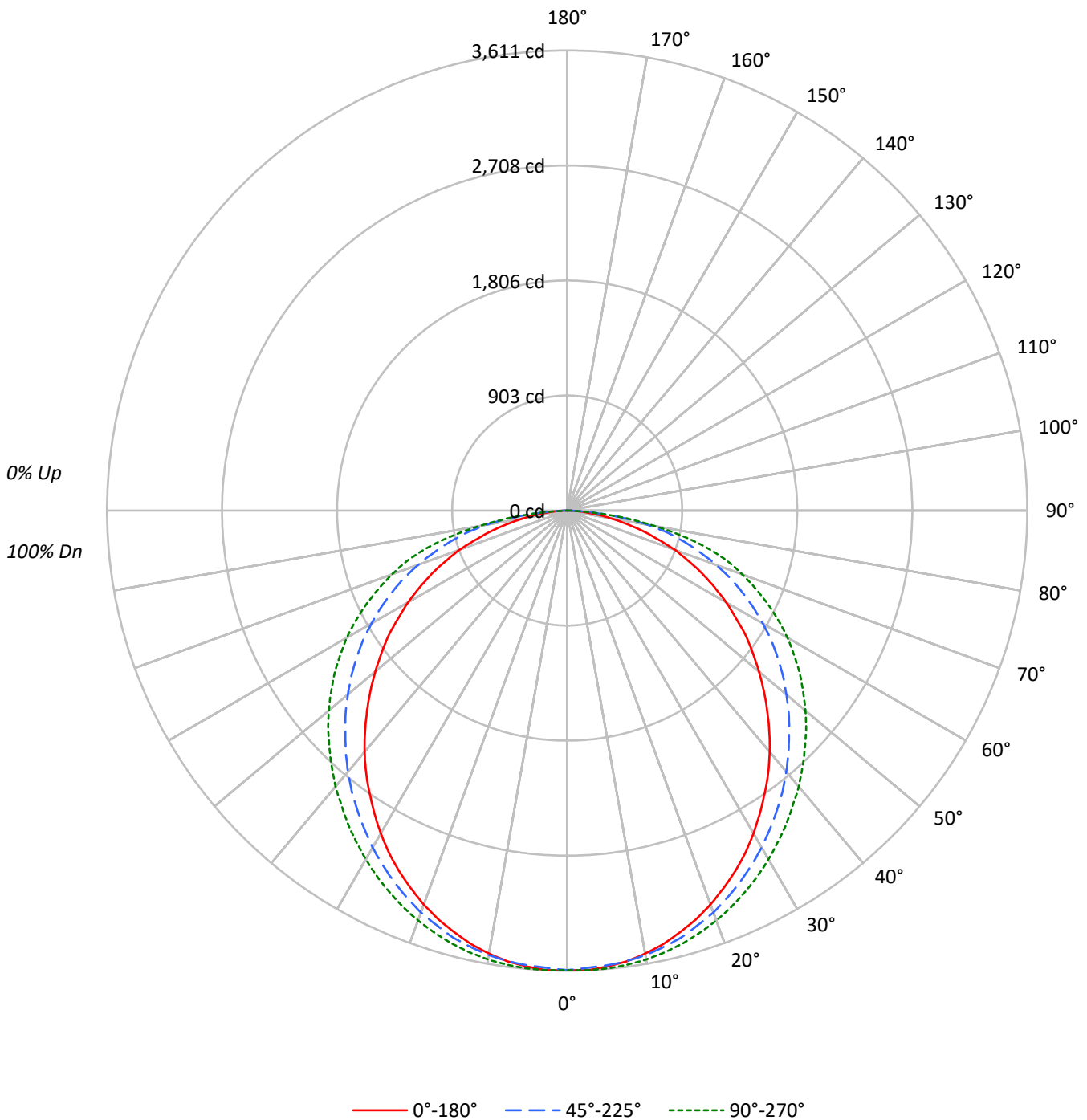
Input Watts (W): 84.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	9707	9707	9707
5°	9706	9677	9744
10°	9645	9679	9775
15°	9541	9658	9790
20°	9420	9611	9802
25°	9267	9543	9804
30°	9088	9486	9818
35°	8881	9429	9855
40°	8690	9399	9935
45°	8453	9374	10042
50°	8226	9401	10224
55°	8033	9466	10453
60°	7761	9537	10745
65°	7451	9652	11070
70°	7068	9787	11512
75°	6330	9923	11893
80°	5329	9950	10793
85°	3955	7531	7095



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	341.8	3.1
10°-20°	979.6	8.9
20°-30°	1483.0	13.5
30°-40°	1794.0	16.3
40°-50°	1893.7	17.2
50°-60°	1785.7	16.3
60°-70°	1472.2	13.4
70°-80°	965.8	8.8
80°-90°	265.6	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°	2804.5	25.5
0°-40°	4598.4	41.9
0°-60°	8277.9	75.4
0°-90°	10981.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10981.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3607	3607	3607	3607	3607	
5°	3593	3593	3582	3607	3607	341
15°	3425	3444	3467	3507	3514	966
25°	3121	3160	3214	3281	3302	1437
35°	2704	2774	2870	2968	3000	1692
45°	2221	2321	2463	2595	2639	1714
55°	1712	1833	2018	2168	2228	1525
65°	1170	1310	1516	1677	1739	1155
75°	609	765	954	1105	1144	643
85°	128	221	244	237	230	159
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3607.1	3607.1	3607.1	3607.1	3607.1
2.5°	3610.6	3607.1	3591.3	3612.3	3610.6
5°	3593.0	3593.0	3582.5	3607.1	3607.1
7.5°	3568.5	3570.2	3566.7	3594.8	3594.8
10°	3529.9	3536.9	3542.1	3573.7	3577.2
12.5°	3484.3	3496.5	3507.1	3545.7	3549.2
15°	3424.6	3443.9	3466.7	3507.1	3514.1
17.5°	3363.2	3386.0	3410.6	3463.2	3472.0
20°	3289.5	3315.8	3356.2	3408.8	3422.8
22.5°	3207.1	3243.9	3286.0	3349.2	3366.7
25°	3121.1	3159.7	3214.1	3280.7	3301.8
27.5°	3028.1	3073.7	3135.1	3212.3	3235.1
30°	2924.6	2977.2	3052.7	3135.1	3159.7
32.5°	2815.8	2877.2	2961.4	3052.7	3080.7
35°	2703.5	2773.7	2870.2	2968.5	3000.0
37.5°	2593.0	2663.2	2777.2	2880.7	2910.6
40°	2473.7	2550.9	2675.5	2786.0	2828.1
42.5°	2347.4	2438.6	2570.2	2693.0	2733.4
45°	2221.1	2321.1	2463.2	2594.8	2638.6
47.5°	2093.0	2203.5	2359.7	2493.0	2543.9
50°	1964.9	2082.5	2245.6	2389.5	2442.1
52.5°	1835.1	1957.9	2135.1	2287.7	2335.1
55°	1712.3	1833.4	2017.6	2168.4	2228.1
57.5°	1570.2	1707.0	1901.8	2054.4	2112.3
60°	1442.1	1575.5	1772.0	1933.4	1996.5
62.5°	1303.5	1440.4	1647.4	1808.8	1870.2
65°	1170.2	1310.5	1515.8	1677.2	1738.6
67.5°	1026.3	1173.7	1384.2	1540.4	1600.0
70°	898.3	1036.9	1243.9	1403.5	1463.2
72.5°	742.1	900.0	1098.3	1256.2	1321.1
75°	608.8	764.9	954.4	1105.3	1143.9
77.5°	468.4	624.6	812.3	910.5	936.9
80°	343.9	491.2	642.1	694.7	696.5
82.5°	231.6	361.4	447.4	473.7	470.2
85°	128.1	221.1	243.9	236.8	229.8
87.5°	52.6	73.7	59.6	42.1	33.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)