

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: P474597

Luminaire Tested: **24CZ2-115VHE-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474597
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-115VHE-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: 10552.4 lumens
Efficiency: N/A
Efficacy: 130.9 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

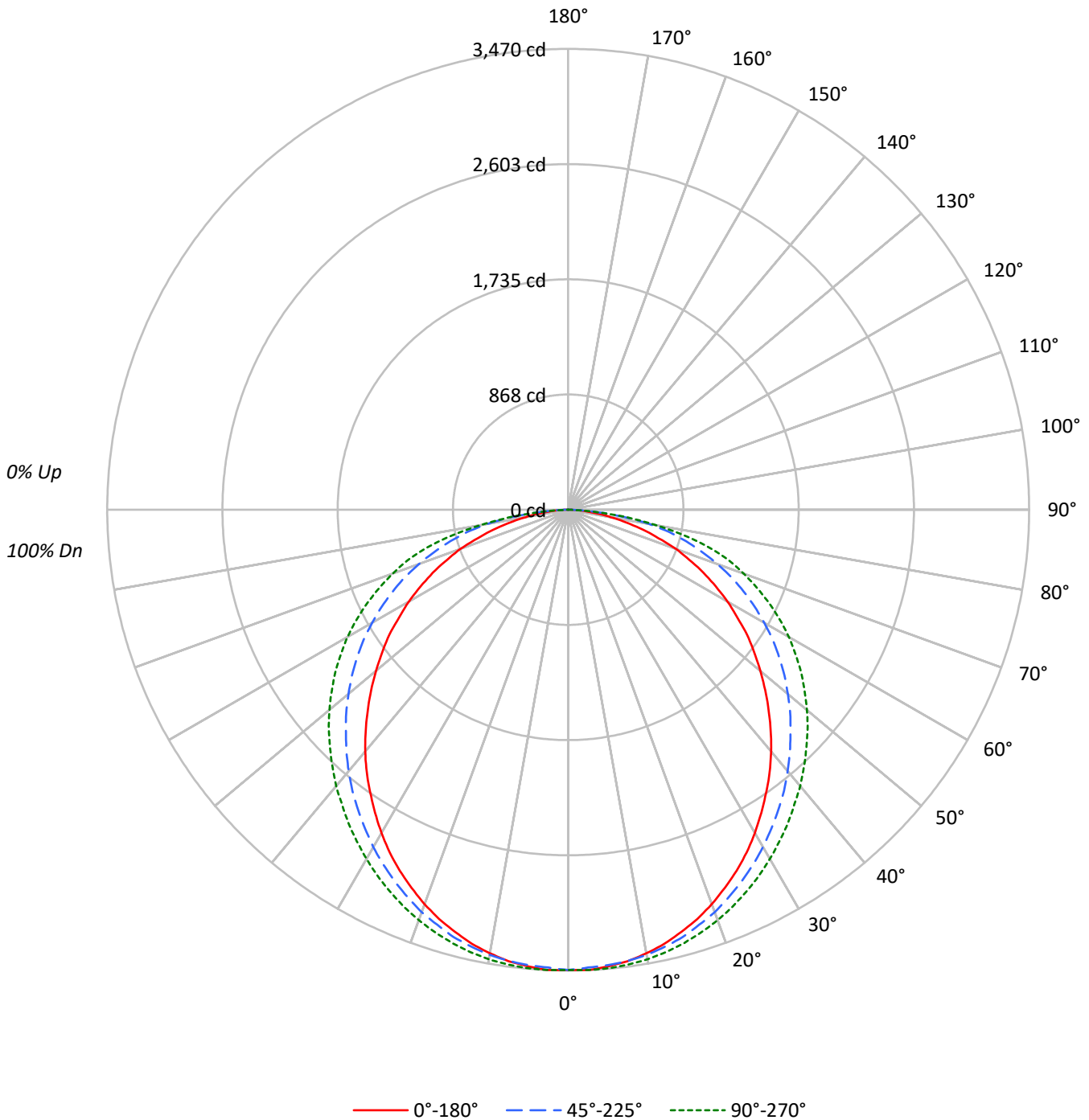
Input Watts (W): 80.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	9327	9327	9327
5°	9326	9299	9363
10°	9268	9301	9393
15°	9168	9281	9407
20°	9052	9235	9419
25°	8905	9170	9421
30°	8732	9115	9434
35°	8534	9061	9470
40°	8350	9031	9546
45°	8122	9008	9649
50°	7905	9034	9824
55°	7720	9096	10045
60°	7458	9164	10325
65°	7160	9275	10638
70°	6792	9404	11062
75°	6082	9535	11429
80°	5120	9561	10372
85°	3801	7234	6817



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	328.5	3.1
10°-20°	941.4	8.9
20°-30°	1425.0	13.5
30°-40°	1723.9	16.3
40°-50°	1819.7	17.2
50°-60°	1716.0	16.3
60°-70°	1414.7	13.4
70°-80°	928.1	8.8
80°-90°	255.2	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°	2694.9	25.5
0°-40°	4418.8	41.9
0°-60°	7954.4	75.4
0°-90°	10552.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10552.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3466	3466	3466	3466	3466	
5°	3453	3453	3442	3466	3466	328
15°	3291	3309	3331	3370	3377	928
25°	2999	3036	3088	3153	3173	1381
35°	2598	2665	2758	2852	2883	1626
45°	2134	2230	2367	2493	2536	1647
55°	1645	1762	1939	2084	2141	1466
65°	1124	1259	1457	1612	1671	1110
75°	585	735	917	1062	1099	618
85°	123	212	234	228	221	153
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3466.1	3466.1	3466.1	3466.1	3466.1
2.5°	3469.5	3466.1	3451.0	3471.2	3469.5
5°	3452.6	3452.6	3442.5	3466.1	3466.1
7.5°	3429.0	3430.7	3427.4	3454.3	3454.3
10°	3391.9	3398.7	3403.7	3434.1	3437.5
12.5°	3348.1	3359.9	3370.0	3407.1	3410.5
15°	3290.8	3309.3	3331.3	3370.0	3376.8
17.5°	3231.8	3253.7	3277.3	3327.9	3336.3
20°	3161.0	3186.3	3225.0	3275.6	3289.1
22.5°	3081.8	3117.2	3157.6	3218.3	3235.2
25°	2999.1	3036.2	3088.5	3152.6	3172.8
27.5°	2909.8	2953.6	3012.6	3086.8	3108.7
30°	2810.3	2860.9	2933.4	3012.6	3036.2
32.5°	2705.8	2764.8	2845.7	2933.4	2960.4
35°	2597.9	2665.3	2758.1	2852.5	2882.8
37.5°	2491.7	2559.1	2668.7	2768.2	2796.8
40°	2377.1	2451.2	2570.9	2677.1	2717.6
42.5°	2255.7	2343.3	2469.8	2587.8	2626.6
45°	2134.3	2230.4	2366.9	2493.4	2535.5
47.5°	2011.2	2117.4	2267.5	2395.6	2444.5
50°	1888.2	2001.1	2157.9	2296.1	2346.7
52.5°	1763.4	1881.4	2051.7	2198.4	2243.9
55°	1645.4	1761.7	1938.7	2083.7	2141.0
57.5°	1508.8	1640.3	1827.5	1974.1	2029.8
60°	1385.8	1513.9	1702.7	1857.8	1918.5
62.5°	1252.6	1384.1	1583.0	1738.1	1797.1
65°	1124.5	1259.3	1456.6	1611.7	1670.7
67.5°	986.2	1127.8	1330.1	1480.2	1537.5
70°	863.2	996.3	1195.3	1348.7	1406.0
72.5°	713.1	864.8	1055.3	1207.1	1269.5
75°	585.0	735.0	917.1	1062.1	1099.2
77.5°	450.1	600.2	780.6	875.0	900.2
80°	330.4	472.0	617.0	667.6	669.3
82.5°	222.5	347.3	429.9	455.2	451.8
85°	123.1	212.4	234.3	227.6	220.8
87.5°	50.6	70.8	57.3	40.5	32.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)