

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: P474657

Luminaire Tested: **24CZ2-165VHE-SQR-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474657
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-165VHE-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: 15707.2 lumens
Efficiency: N/A
Efficacy: 128.6 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

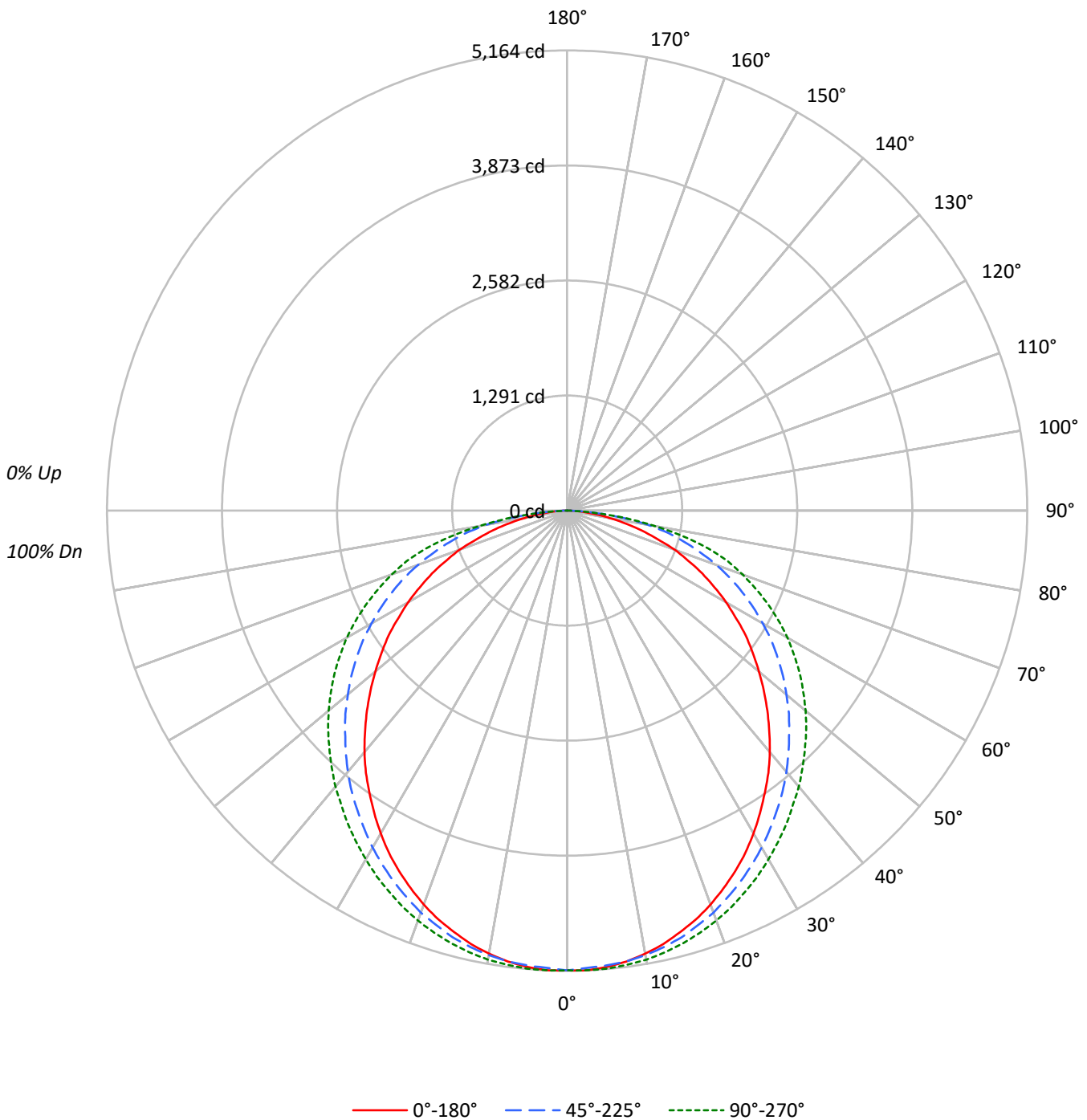
Input Watts (W): 122.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	13884	13884	13884
5°	13883	13842	13937
10°	13796	13844	13981
15°	13646	13814	14003
20°	13474	13747	14020
25°	13255	13650	14022
30°	12998	13568	14043
35°	12703	13487	14097
40°	12429	13443	14210
45°	12090	13408	14363
50°	11766	13447	14624
55°	11491	13539	14952
60°	11101	13641	15369
65°	10658	13805	15834
70°	10109	13999	16466
75°	9054	14193	17011
80°	7621	14232	15438
85°	5656	10769	10149



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	488.9	3.1
10°-20°	1401.2	8.9
20°-30°	2121.2	13.5
30°-40°	2566.0	16.3
40°-50°	2708.6	17.2
50°-60°	2554.2	16.3
60°-70°	2105.8	13.4
70°-80°	1381.4	8.8
80°-90°	379.8	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°	4011.3	25.5
0°-40°	6577.4	41.9
0°-60°	11840.2	75.4
0°-90°	15707.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15707.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5159	5159	5159	5159	5159	
5°	5139	5139	5124	5159	5159	488
15°	4898	4926	4959	5016	5026	1382
25°	4464	4519	4597	4693	4723	2056
35°	3867	3967	4105	4246	4291	2421
45°	3177	3320	3523	3711	3774	2452
55°	2449	2622	2886	3102	3187	2182
65°	1674	1874	2168	2399	2487	1653
75°	871	1094	1365	1581	1636	920
85°	183	316	349	339	329	227
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5159.3	5159.3	5159.3	5159.3	5159.3
2.5°	5164.4	5159.3	5136.7	5166.9	5164.4
5°	5139.3	5139.3	5124.2	5159.3	5159.3
7.5°	5104.1	5106.6	5101.6	5141.8	5141.8
10°	5048.9	5059.0	5066.5	5111.7	5116.7
12.5°	4983.7	5001.2	5016.3	5071.5	5076.5
15°	4898.4	4926.0	4958.6	5016.3	5026.3
17.5°	4810.5	4843.1	4878.3	4953.6	4966.1
20°	4705.1	4742.8	4800.5	4875.8	4895.8
22.5°	4587.2	4639.9	4700.1	4790.4	4815.5
25°	4464.2	4519.4	4597.2	4692.6	4722.7
27.5°	4331.2	4396.5	4484.3	4594.7	4627.3
30°	4183.2	4258.5	4366.4	4484.3	4519.4
32.5°	4027.6	4115.4	4235.9	4366.4	4406.5
35°	3867.0	3967.4	4105.4	4245.9	4291.1
37.5°	3708.9	3809.3	3972.4	4120.4	4163.1
40°	3538.3	3648.7	3826.8	3984.9	4045.2
42.5°	3357.6	3488.1	3676.3	3851.9	3909.6
45°	3176.9	3319.9	3523.2	3711.4	3774.1
47.5°	2993.7	3151.8	3375.1	3565.9	3638.6
50°	2810.5	2978.7	3212.0	3417.8	3493.1
52.5°	2624.8	2800.5	3053.9	3272.3	3340.0
55°	2449.2	2622.3	2885.8	3101.6	3186.9
57.5°	2245.9	2441.6	2720.2	2938.5	3021.3
60°	2062.7	2253.4	2534.5	2765.4	2855.7
62.5°	1864.5	2060.2	2356.3	2587.2	2675.0
65°	1673.8	1874.5	2168.1	2399.0	2486.8
67.5°	1468.0	1678.8	1979.9	2203.3	2288.6
70°	1284.8	1483.1	1779.2	2007.5	2092.8
72.5°	1061.5	1287.3	1570.9	1796.7	1889.6
75°	870.8	1094.1	1365.1	1580.9	1636.1
77.5°	670.0	893.3	1161.9	1302.4	1340.0
80°	491.8	702.6	918.4	993.7	996.2
82.5°	331.2	516.9	639.9	677.5	672.5
85°	183.2	316.2	348.8	338.8	328.7
87.5°	75.3	105.4	85.3	60.2	47.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)