

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: P474651

Luminaire Tested: **24CZ2-135VHE-SQR-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474651
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-135VHE-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: 12901.7 lumens
Efficiency: N/A
Efficacy: 133.3 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

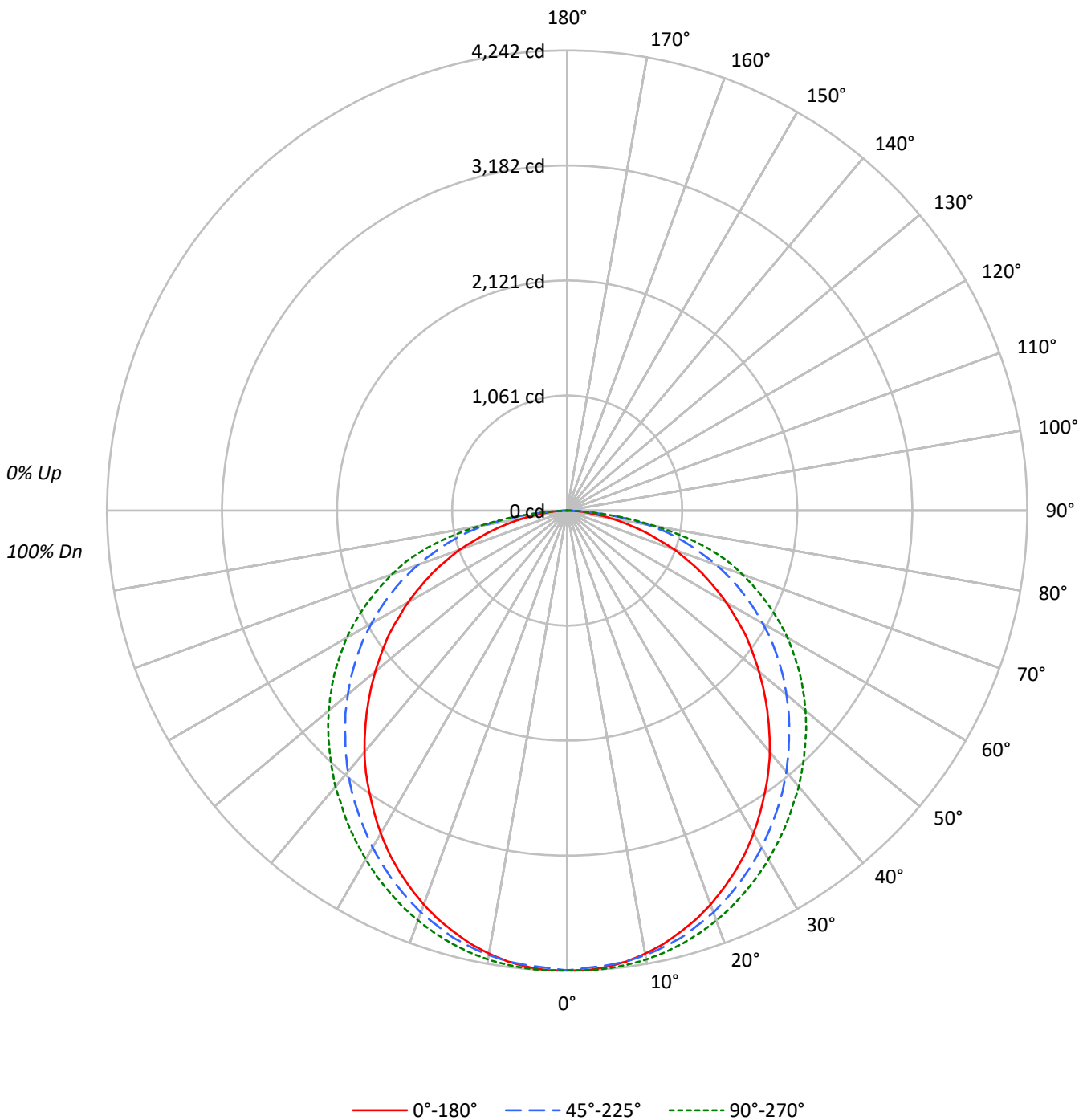
Input Watts (W): 96.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	11404	11404	11404
5°	11403	11370	11447
10°	11332	11371	11484
15°	11209	11347	11502
20°	11067	11292	11516
25°	10888	11212	11518
30°	10677	11144	11535
35°	10434	11078	11579
40°	10209	11042	11672
45°	9931	11013	11797
50°	9664	11045	12012
55°	9438	11121	12281
60°	9119	11204	12624
65°	8754	11340	13006
70°	8303	11498	13525
75°	7436	11658	13973
80°	6261	11691	12681
85°	4647	8846	8336



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	401.6	3.1
10°-20°	1150.9	8.9
20°-30°	1742.3	13.5
30°-40°	2107.7	16.3
40°-50°	2224.8	17.2
50°-60°	2098.0	16.3
60°-70°	1729.7	13.4
70°-80°	1134.7	8.8
80°-90°	312.0	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°	3294.9	25.5
0°-40°	5402.5	41.9
0°-60°	9725.4	75.4
0°-90°	12901.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12901.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4238	4238	4238	4238	4238	
5°	4221	4221	4209	4238	4238	401
15°	4023	4046	4073	4120	4129	1135
25°	3667	3712	3776	3854	3879	1689
35°	3176	3259	3372	3488	3525	1988
45°	2610	2727	2894	3048	3100	2014
55°	2012	2154	2370	2548	2618	1792
65°	1375	1540	1781	1970	2043	1358
75°	715	899	1121	1299	1344	756
85°	150	260	286	278	270	187
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4237.8	4237.8	4237.8	4237.8	4237.8
2.5°	4241.9	4237.8	4219.3	4244.0	4241.9
5°	4221.3	4221.3	4209.0	4237.8	4237.8
7.5°	4192.5	4194.5	4190.4	4223.4	4223.4
10°	4147.1	4155.4	4161.5	4198.6	4202.8
12.5°	4093.5	4108.0	4120.3	4165.7	4169.8
15°	4023.4	4046.1	4072.9	4120.3	4128.6
17.5°	3951.3	3978.1	4007.0	4068.8	4079.1
20°	3864.7	3895.7	3943.1	4004.9	4021.4
22.5°	3767.9	3811.1	3860.6	3934.8	3955.4
25°	3666.9	3712.2	3776.1	3854.4	3879.2
27.5°	3557.6	3611.2	3683.3	3774.0	3800.8
30°	3436.0	3497.8	3586.5	3683.3	3712.2
32.5°	3308.2	3380.4	3479.3	3586.5	3619.5
35°	3176.3	3258.7	3372.1	3487.5	3524.6
37.5°	3046.4	3128.9	3262.9	3384.5	3419.5
40°	2906.3	2997.0	3143.3	3273.2	3322.6
42.5°	2757.9	2865.1	3019.6	3163.9	3211.3
45°	2609.5	2727.0	2893.9	3048.5	3100.0
47.5°	2459.0	2588.9	2772.3	2929.0	2988.7
50°	2308.5	2446.6	2638.3	2807.3	2869.2
52.5°	2156.0	2300.3	2508.5	2687.8	2743.4
55°	2011.7	2153.9	2370.4	2547.6	2617.7
57.5°	1844.8	2005.5	2234.3	2413.7	2481.7
60°	1694.3	1851.0	2081.8	2271.4	2345.6
62.5°	1531.5	1692.2	1935.5	2125.1	2197.2
65°	1374.8	1539.7	1780.9	1970.5	2042.6
67.5°	1205.8	1378.9	1626.3	1809.7	1879.8
70°	1055.3	1218.2	1461.4	1649.0	1719.0
72.5°	871.9	1057.4	1290.3	1475.8	1552.1
75°	715.2	898.7	1121.3	1298.6	1343.9
77.5°	550.3	733.8	954.3	1069.8	1100.7
80°	404.0	577.1	754.4	816.2	818.3
82.5°	272.1	424.6	525.6	556.5	552.4
85°	150.5	259.7	286.5	278.3	270.0
87.5°	61.8	86.6	70.1	49.5	39.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)