

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: P473802

Luminaire Tested: **24CZ2-140VHE-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473802
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-140VHE-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13545.5 lumens
Efficiency: N/A
Efficacy: 134.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

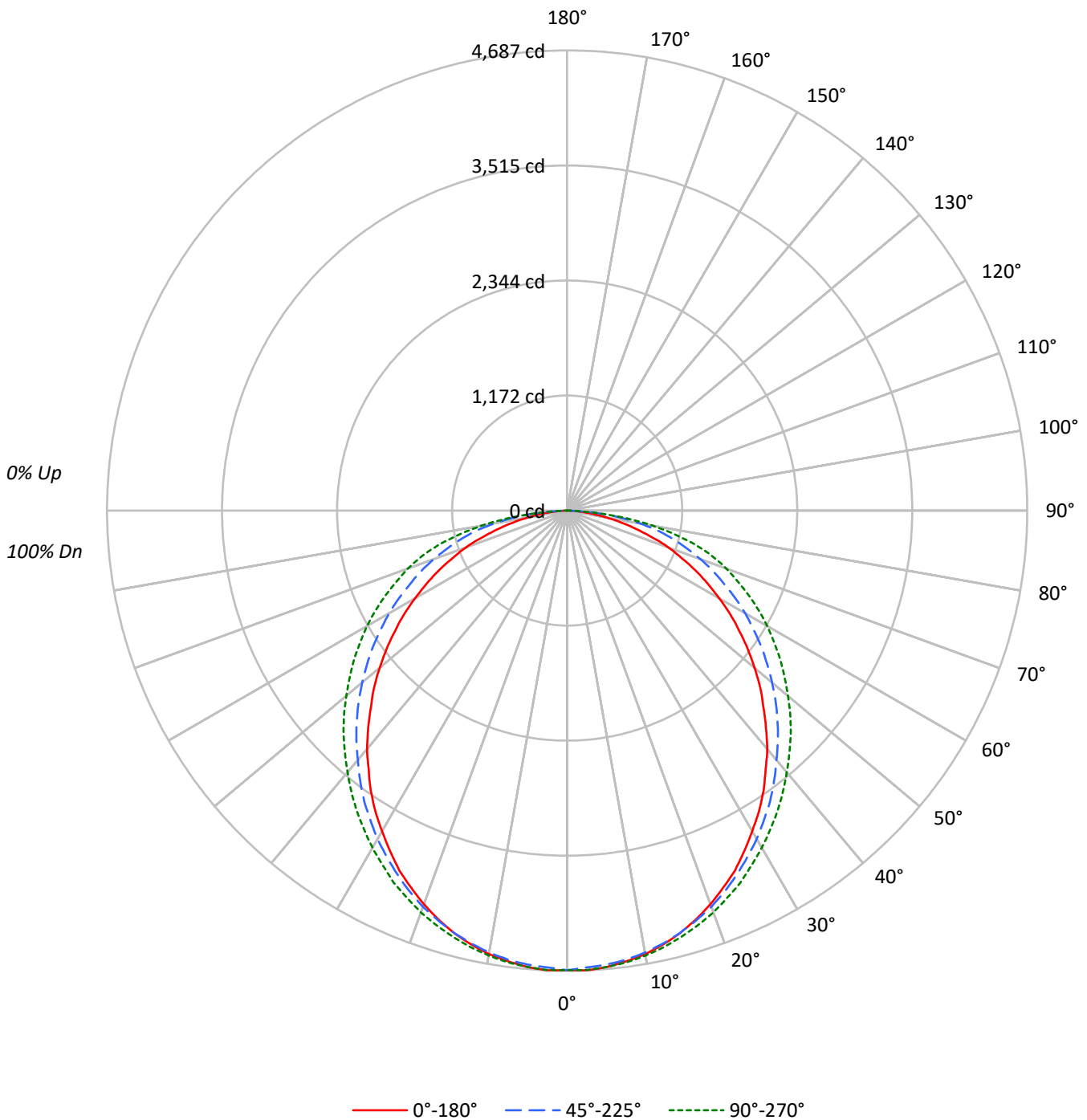
Input Watts (W): 100.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	89	82	76	95	88	81	75	84	78	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52	63	57	51	61	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44	55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6298	6298	6298
5°	6301	6269	6301
10°	6267	6246	6287
15°	6203	6200	6261
20°	6110	6148	6235
25°	6004	6072	6205
30°	5858	6001	6160
35°	5726	5924	6136
40°	5569	5827	6111
45°	5380	5767	6129
50°	5217	5703	6147
55°	5026	5662	6217
60°	4817	5635	6330
65°	4591	5615	6493
70°	4321	5673	6792
75°	3800	5791	7064
80°	3171	5833	6816
85°	2263	5000	5067



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	442.5	3.3
10°-20°	1260.4	9.3
20°-30°	1890.8	14.0
30°-40°	2257.4	16.7
40°-50°	2338.3	17.3
50°-60°	2152.6	15.9
60°-70°	1736.4	12.8
70°-80°	1134.6	8.4
80°-90°	332.6	2.5
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°	3593.6	26.5
0°-40°	5851.0	43.2
0°-60°	10341.9	76.3
0°-90°	13545.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13545.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4681	4681	4681	4681	4681	
5°	4666	4661	4641	4668	4666	443
15°	4453	4453	4451	4495	4495	1255
25°	4044	4053	4090	4164	4180	1859
35°	3486	3517	3606	3705	3736	2178
45°	2827	2897	3031	3166	3221	2185
55°	2142	2234	2414	2591	2650	1917
65°	1442	1541	1764	1965	2040	1426
75°	731	869	1114	1306	1359	780
85°	147	254	324	344	328	182
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4680.8	4680.8	4680.8	4680.8	4680.8
2.5°	4687.4	4680.8	4656.7	4685.2	4683.0
5°	4665.5	4661.1	4641.4	4667.7	4665.5
7.5°	4630.5	4628.3	4613.0	4641.4	4641.4
10°	4586.7	4582.3	4571.4	4604.2	4602.0
12.5°	4525.4	4523.3	4516.7	4556.1	4553.9
15°	4453.2	4453.2	4451.0	4494.8	4494.8
17.5°	4365.7	4367.9	4376.6	4427.0	4429.2
20°	4267.2	4276.0	4293.5	4350.4	4354.8
22.5°	4155.6	4173.1	4197.2	4260.7	4267.2
25°	4044.0	4052.8	4090.0	4164.4	4179.7
27.5°	3908.3	3930.2	3978.4	4055.0	4070.3
30°	3770.5	3801.1	3862.4	3941.2	3965.2
32.5°	3634.8	3661.1	3733.3	3823.0	3851.4
35°	3486.0	3516.6	3606.4	3704.8	3735.5
37.5°	3321.9	3370.0	3464.1	3577.9	3610.7
40°	3170.9	3214.6	3317.5	3444.4	3479.4
42.5°	2998.0	3052.7	3177.4	3306.6	3350.3
45°	2827.3	2897.3	3030.8	3166.5	3221.2
47.5°	2667.6	2724.5	2882.0	3035.2	3083.3
50°	2492.5	2558.1	2724.5	2886.4	2936.7
52.5°	2319.6	2398.4	2566.9	2737.6	2792.3
55°	2142.4	2234.3	2413.7	2591.0	2650.1
57.5°	1971.7	2063.6	2249.6	2437.8	2499.1
60°	1790.0	1888.5	2094.2	2275.9	2352.4
62.5°	1615.0	1713.5	1930.1	2127.0	2199.3
65°	1442.1	1540.6	1763.8	1965.1	2039.5
67.5°	1262.7	1369.9	1608.4	1803.2	1875.4
70°	1098.5	1201.4	1442.1	1650.0	1726.6
72.5°	910.3	1032.9	1278.0	1483.7	1555.9
75°	730.9	868.8	1113.9	1306.4	1358.9
77.5°	564.6	702.5	947.5	1092.0	1124.8
80°	409.2	549.3	752.8	853.4	879.7
82.5°	264.8	409.2	544.9	612.7	621.5
85°	146.6	253.8	323.9	343.6	328.2
87.5°	52.5	96.3	94.1	76.6	61.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)