

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: P473902

Luminaire Tested: **24CZ2-140VHE-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473902
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-140VHE-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14303.5 lumens
Efficiency: N/A
Efficacy: 142.3 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

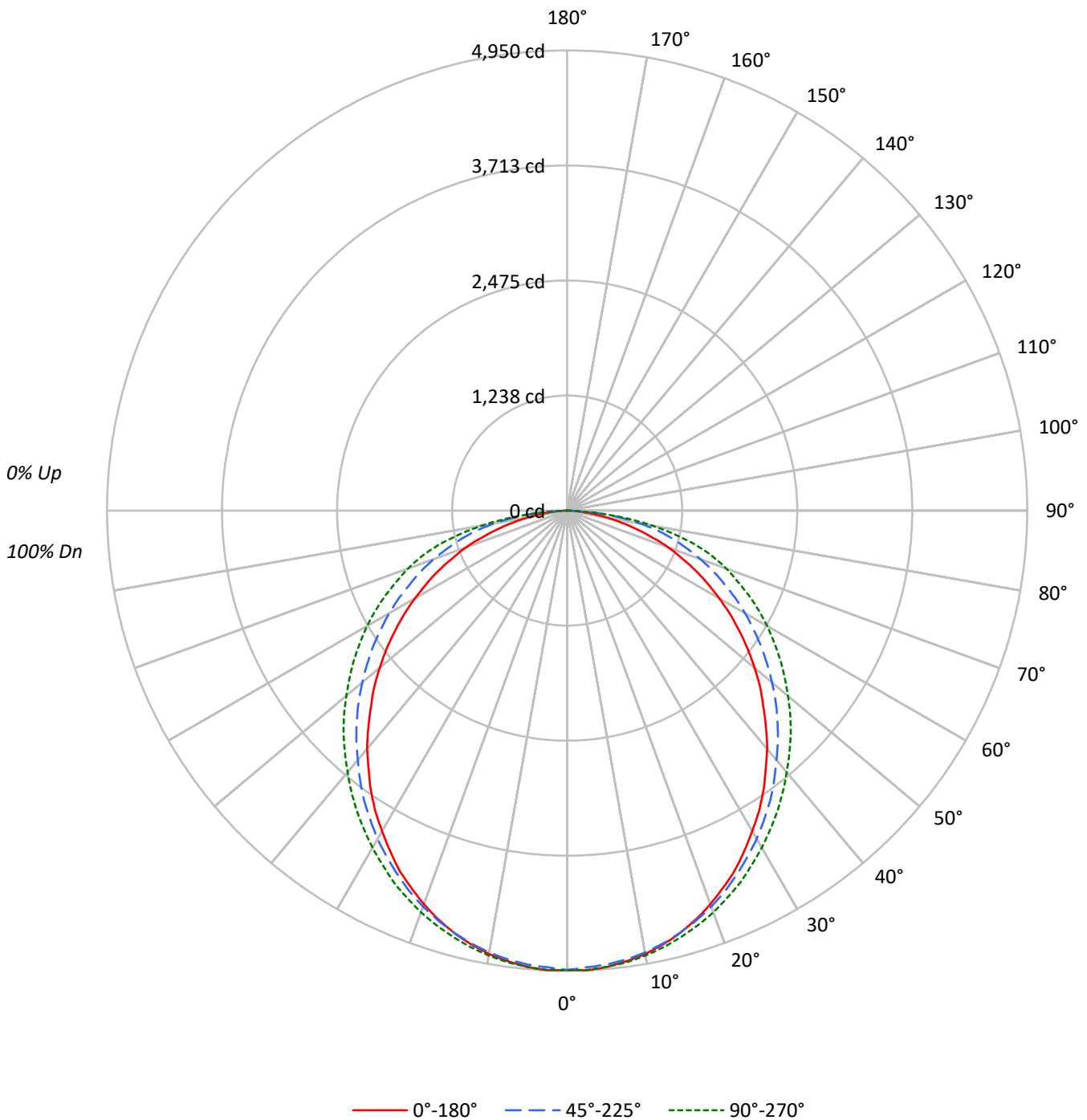
Input Watts (W): 100.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	6650	6650	6650
5°	6654	6620	6654
10°	6617	6595	6639
15°	6550	6547	6611
20°	6452	6492	6584
25°	6340	6412	6552
30°	6186	6337	6505
35°	6046	6255	6479
40°	5881	6153	6453
45°	5681	6090	6472
50°	5509	6022	6491
55°	5307	5979	6564
60°	5086	5951	6685
65°	4848	5930	6856
70°	4563	5991	7172
75°	4012	6115	7460
80°	3348	6159	7197
85°	2390	5280	5351



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	467.2	3.3
10°-20°	1330.9	9.3
20°-30°	1996.6	14.0
30°-40°	2383.7	16.7
40°-50°	2469.1	17.3
50°-60°	2273.1	15.9
60°-70°	1833.6	12.8
70°-80°	1198.0	8.4
80°-90°	351.3	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°	3794.7	26.5
0°-40°	6178.5	43.2
0°-60°	10920.6	76.3
0°-90°	14303.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14303.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4943	4943	4943	4943	4943	
5°	4927	4922	4901	4929	4927	468
15°	4702	4702	4700	4746	4746	1325
25°	4270	4280	4319	4397	4414	1963
35°	3681	3713	3808	3912	3944	2299
45°	2986	3060	3200	3344	3402	2308
55°	2262	2359	2549	2736	2798	2025
65°	1523	1627	1862	2075	2154	1506
75°	772	917	1176	1380	1435	824
85°	155	268	342	363	347	192
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4942.7	4942.7	4942.7	4942.7	4942.7
2.5°	4949.7	4942.7	4917.3	4947.4	4945.1
5°	4926.6	4922.0	4901.2	4928.9	4926.6
7.5°	4889.6	4887.3	4871.1	4901.2	4901.2
10°	4843.4	4838.8	4827.2	4861.9	4859.6
12.5°	4778.7	4776.4	4769.4	4811.0	4808.7
15°	4702.4	4702.4	4700.1	4746.3	4746.3
17.5°	4610.0	4612.3	4621.6	4674.7	4677.0
20°	4506.0	4515.3	4533.7	4593.8	4598.4
22.5°	4388.2	4406.6	4432.1	4499.1	4506.0
25°	4270.3	4279.6	4318.8	4397.4	4413.6
27.5°	4127.0	4150.2	4201.0	4281.9	4298.0
30°	3981.5	4013.8	4078.5	4161.7	4187.1
32.5°	3838.2	3865.9	3942.2	4036.9	4067.0
35°	3681.1	3713.4	3808.2	3912.1	3944.5
37.5°	3507.8	3558.6	3658.0	3778.1	3812.8
40°	3348.3	3394.5	3503.1	3637.2	3674.1
42.5°	3165.8	3223.5	3355.2	3491.6	3537.8
45°	2985.5	3059.5	3200.4	3343.7	3401.5
47.5°	2816.8	2876.9	3043.3	3205.0	3255.9
50°	2632.0	2701.3	2876.9	3047.9	3101.1
52.5°	2449.4	2532.6	2710.5	2890.8	2948.6
55°	2262.2	2359.3	2548.8	2736.0	2798.3
57.5°	2082.0	2179.1	2375.5	2574.2	2638.9
60°	1890.2	1994.2	2211.4	2403.2	2484.1
62.5°	1705.4	1809.3	2038.1	2246.1	2322.3
65°	1522.8	1626.8	1862.5	2075.1	2153.6
67.5°	1333.3	1446.5	1698.4	1904.1	1980.3
70°	1160.0	1268.6	1522.8	1742.3	1823.2
72.5°	961.3	1090.7	1349.5	1566.7	1643.0
75°	771.8	917.4	1176.2	1379.5	1435.0
77.5°	596.2	741.8	1000.6	1153.1	1187.7
80°	432.1	580.0	794.9	901.2	928.9
82.5°	279.6	432.1	575.4	647.0	656.3
85°	154.8	268.1	342.0	362.8	346.6
87.5°	55.5	101.7	99.4	80.9	64.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)