

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: P474002

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474002
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-140VHE-S-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13816.7 lumens
Efficiency: N/A
Efficacy: 137.5 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

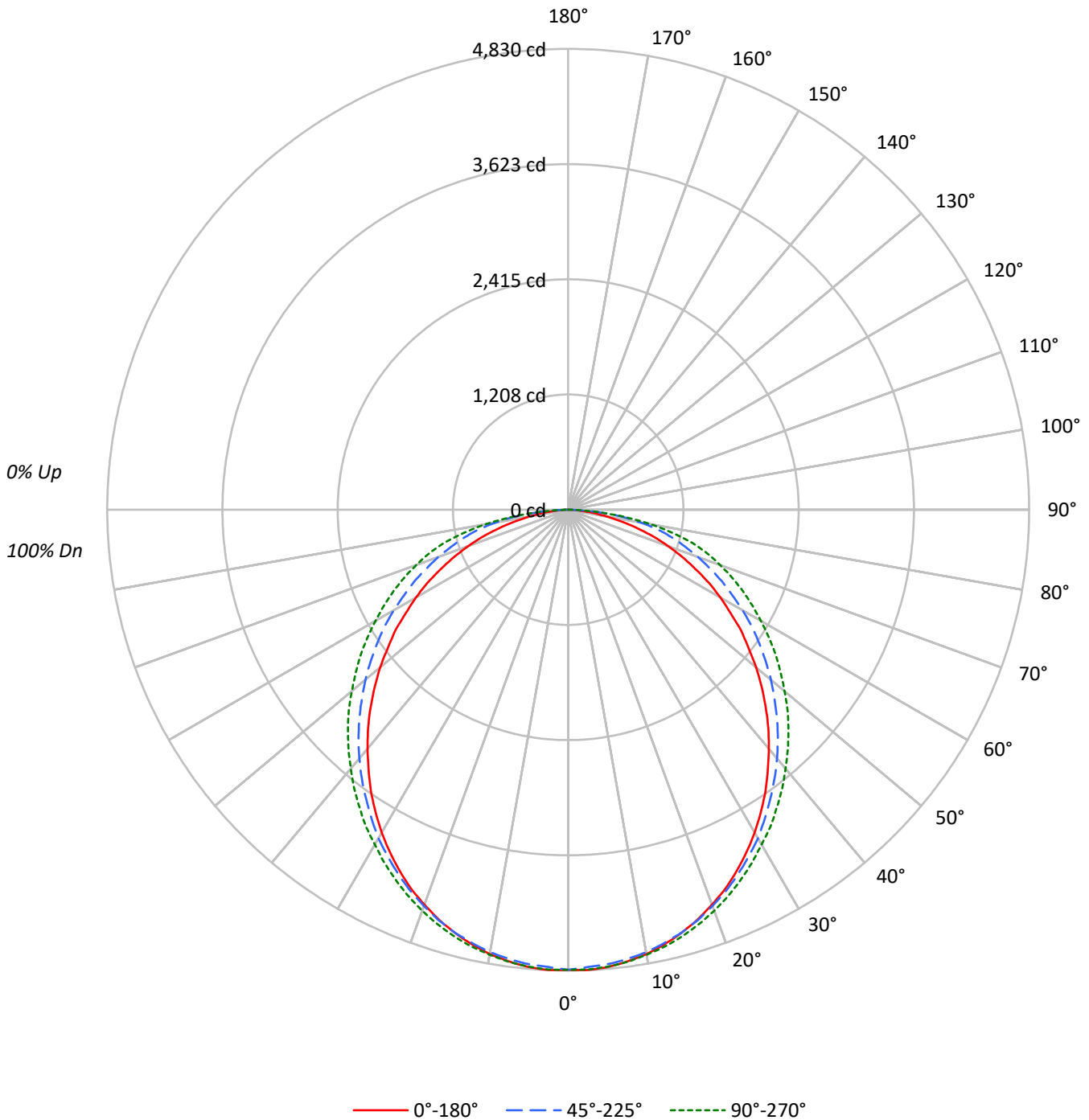
Input Watts (W): 100.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6489	6489	6489
5°	6498	6458	6492
10°	6462	6434	6471
15°	6395	6392	6446
20°	6307	6327	6405
25°	6203	6257	6354
30°	6072	6177	6294
35°	5920	6069	6259
40°	5744	5979	6222
45°	5571	5886	6210
50°	5382	5805	6195
55°	5191	5734	6229
60°	4953	5680	6272
65°	4689	5657	6423
70°	4375	5687	6652
75°	3893	5852	7008
80°	3183	5979	6840
85°	2242	5221	5326



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	455.9	3.3
10°-20°	1298.6	9.4
20°-30°	1946.5	14.1
30°-40°	2318.4	16.8
40°-50°	2390.4	17.3
50°-60°	2181.3	15.8
60°-70°	1744.2	12.6
70°-80°	1139.3	8.2
80°-90°	342.1	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°	3701.0	26.8
0°-40°	6019.4	43.6
0°-60°	10591.1	76.7
0°-90°	13816.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13816.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4823	4823	4823	4823	4823	
5°	4811	4802	4782	4811	4807	457
15°	4591	4593	4589	4628	4628	1294
25°	4178	4185	4214	4276	4280	1924
35°	3604	3629	3695	3788	3810	2251
45°	2928	2980	3093	3223	3264	2258
55°	2213	2276	2444	2605	2655	1971
65°	1473	1573	1777	1952	2018	1460
75°	749	874	1126	1307	1348	796
85°	145	261	338	345	345	184
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4822.7	4822.7	4822.7	4822.7	4822.7
2.5°	4829.5	4822.7	4797.7	4827.2	4822.7
5°	4811.3	4802.2	4781.8	4811.3	4806.8
7.5°	4775.0	4770.5	4750.0	4784.1	4779.5
10°	4729.6	4725.1	4709.2	4743.2	4736.4
12.5°	4666.1	4663.8	4652.4	4693.3	4688.8
15°	4591.2	4593.4	4588.9	4627.5	4627.5
17.5°	4504.9	4502.7	4511.7	4559.4	4554.9
20°	4405.1	4407.3	4418.7	4473.2	4473.2
22.5°	4300.7	4298.4	4323.4	4377.8	4382.4
25°	4178.1	4184.9	4214.4	4275.7	4280.2
27.5°	4046.5	4057.8	4094.1	4164.5	4171.3
30°	3908.1	3921.7	3976.1	4042.0	4051.0
32.5°	3756.0	3785.5	3835.4	3919.4	3942.1
35°	3603.9	3628.9	3694.7	3787.8	3810.5
37.5°	3436.0	3476.8	3551.7	3653.9	3683.4
40°	3270.3	3311.2	3404.2	3510.9	3542.7
42.5°	3102.4	3145.5	3252.2	3372.5	3406.5
45°	2927.6	2979.8	3093.3	3222.7	3263.5
47.5°	2748.3	2809.6	2932.2	3072.9	3118.3
50°	2571.3	2632.6	2773.3	2918.6	2959.4
52.5°	2380.7	2457.9	2607.6	2764.2	2805.1
55°	2212.7	2276.3	2444.2	2605.4	2655.3
57.5°	2015.3	2101.5	2280.8	2444.2	2491.9
60°	1840.6	1920.0	2110.6	2276.3	2330.8
62.5°	1663.5	1745.2	1935.9	2124.2	2174.2
65°	1472.9	1572.8	1777.0	1951.8	2017.6
67.5°	1291.3	1395.7	1604.5	1790.6	1858.7
70°	1112.0	1218.7	1445.7	1636.3	1690.8
72.5°	935.0	1046.2	1282.3	1468.4	1531.9
75°	748.9	873.8	1125.7	1307.2	1348.1
77.5°	574.2	712.6	966.8	1089.4	1118.9
80°	410.8	562.8	771.6	860.1	882.8
82.5°	270.1	417.6	576.4	624.1	617.3
85°	145.2	261.0	338.2	345.0	345.0
87.5°	56.7	104.4	106.7	81.7	77.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)