

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: P474058

Luminaire Tested: **24CZ2-170VHE-S-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474058  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-170VHE-S-UNV-L835-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

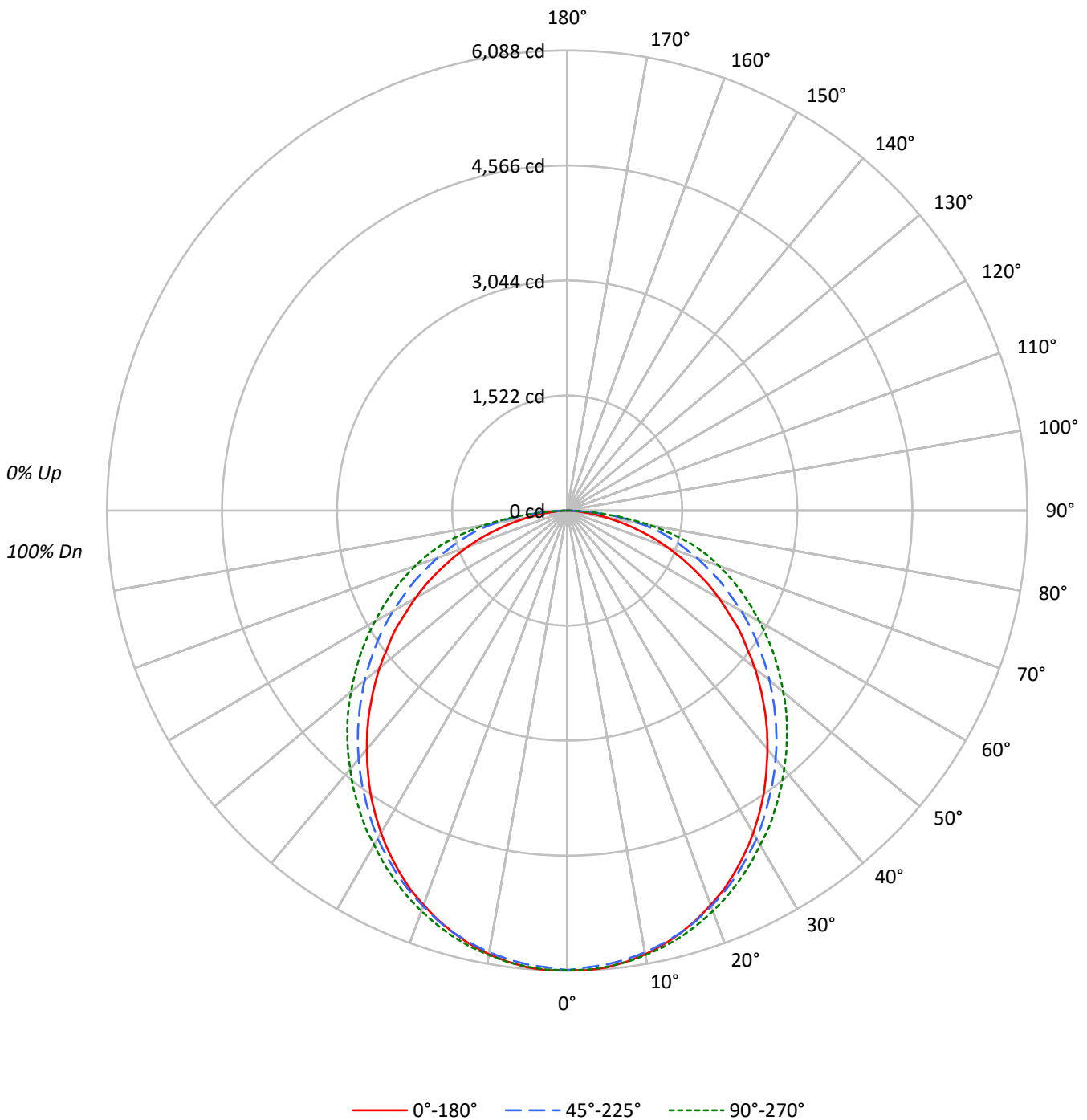
Lumens per Lamp: N/A  
Luminaire Lumens: 17417.6 lumens  
Efficiency: N/A  
Efficacy: 137.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 126.6  
Input Voltage (V): 120  
Input Current (Ain): 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°	8180	8180	8180
5°	8192	8142	8184
10°	8146	8111	8158
15°	8062	8058	8126
20°	7951	7976	8074
25°	7819	7887	8011
30°	7654	7787	7934
35°	7462	7650	7890
40°	7241	7537	7844
45°	7023	7420	7828
50°	6785	7318	7809
55°	6543	7228	7852
60°	6244	7160	7907
65°	5911	7132	8097
70°	5515	7169	8385
75°	4908	7377	8834
80°	4012	7537	8623
85°	2827	6581	6714



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	574.8	3.3
10°-20°	1637.0	9.4
20°-30°	2453.8	14.1
30°-40°	2922.6	16.8
40°-50°	3013.4	17.3
50°-60°	2749.8	15.8
60°-70°	2198.8	12.6
70°-80°	1436.2	8.2
80°-90°	431.3	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°	4665.6	26.8
0°-40°	7588.2	43.6
0°-60°	13351.4	76.7
0°-90°	17417.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17417.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	6080	6080	6080	6080	6080	
5°	6065	6054	6028	6065	6060	575
15°	5788	5791	5785	5834	5834	1632
25°	5267	5276	5313	5390	5396	2425
35°	4543	4575	4658	4775	4804	2838
45°	3691	3756	3900	4063	4114	2846
55°	2789	2870	3081	3284	3347	2484
65°	1857	1983	2240	2460	2543	1841
75°	944	1102	1419	1648	1699	1003
85°	183	329	426	435	435	232
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	6079.5	6079.5	6079.5	6079.5	6079.5
2.5°	6088.1	6079.5	6048.1	6085.3	6079.5
5°	6065.2	6053.8	6028.0	6065.2	6059.5
7.5°	6019.5	6013.7	5988.0	6030.9	6025.2
10°	5962.2	5956.5	5936.5	5979.4	5970.8
12.5°	5882.1	5879.3	5865.0	5916.5	5910.7
15°	5787.7	5790.6	5784.9	5833.5	5833.5
17.5°	5679.0	5676.1	5687.6	5747.7	5741.9
20°	5553.1	5556.0	5570.3	5639.0	5639.0
22.5°	5421.5	5418.7	5450.1	5518.8	5524.5
25°	5267.0	5275.6	5312.8	5390.0	5395.8
27.5°	5101.1	5115.4	5161.2	5249.9	5258.4
30°	4926.6	4943.7	5012.4	5095.4	5106.8
32.5°	4734.9	4772.1	4835.0	4940.9	4969.5
35°	4543.2	4574.7	4657.6	4774.9	4803.6
37.5°	4331.5	4383.0	4477.4	4606.1	4643.3
40°	4122.6	4174.1	4291.4	4425.9	4466.0
42.5°	3910.9	3965.3	4099.8	4251.4	4294.3
45°	3690.6	3756.4	3899.5	4062.6	4114.1
47.5°	3464.6	3541.9	3696.4	3873.7	3931.0
50°	3241.5	3318.7	3496.1	3679.2	3730.7
52.5°	3001.1	3098.4	3287.2	3484.6	3536.1
55°	2789.4	2869.5	3081.3	3284.4	3347.3
57.5°	2540.5	2649.2	2875.3	3081.3	3141.3
60°	2320.2	2420.4	2660.7	2869.5	2938.2
62.5°	2097.1	2200.1	2440.4	2677.9	2740.8
65°	1856.8	1982.6	2240.1	2460.4	2543.4
67.5°	1627.9	1759.5	2022.7	2257.3	2343.1
70°	1401.9	1536.3	1822.4	2062.8	2131.4
72.5°	1178.7	1318.9	1616.4	1851.0	1931.1
75°	944.1	1101.5	1419.0	1647.9	1699.4
77.5°	723.8	898.3	1218.8	1373.3	1410.5
80°	517.8	709.5	972.7	1084.3	1112.9
82.5°	340.5	526.4	726.7	786.8	778.2
85°	183.1	329.0	426.3	434.9	434.9
87.5°	71.5	131.6	134.5	103.0	97.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)