

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: P473808

Luminaire Tested: **24CZ2-170VHE-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473808
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-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

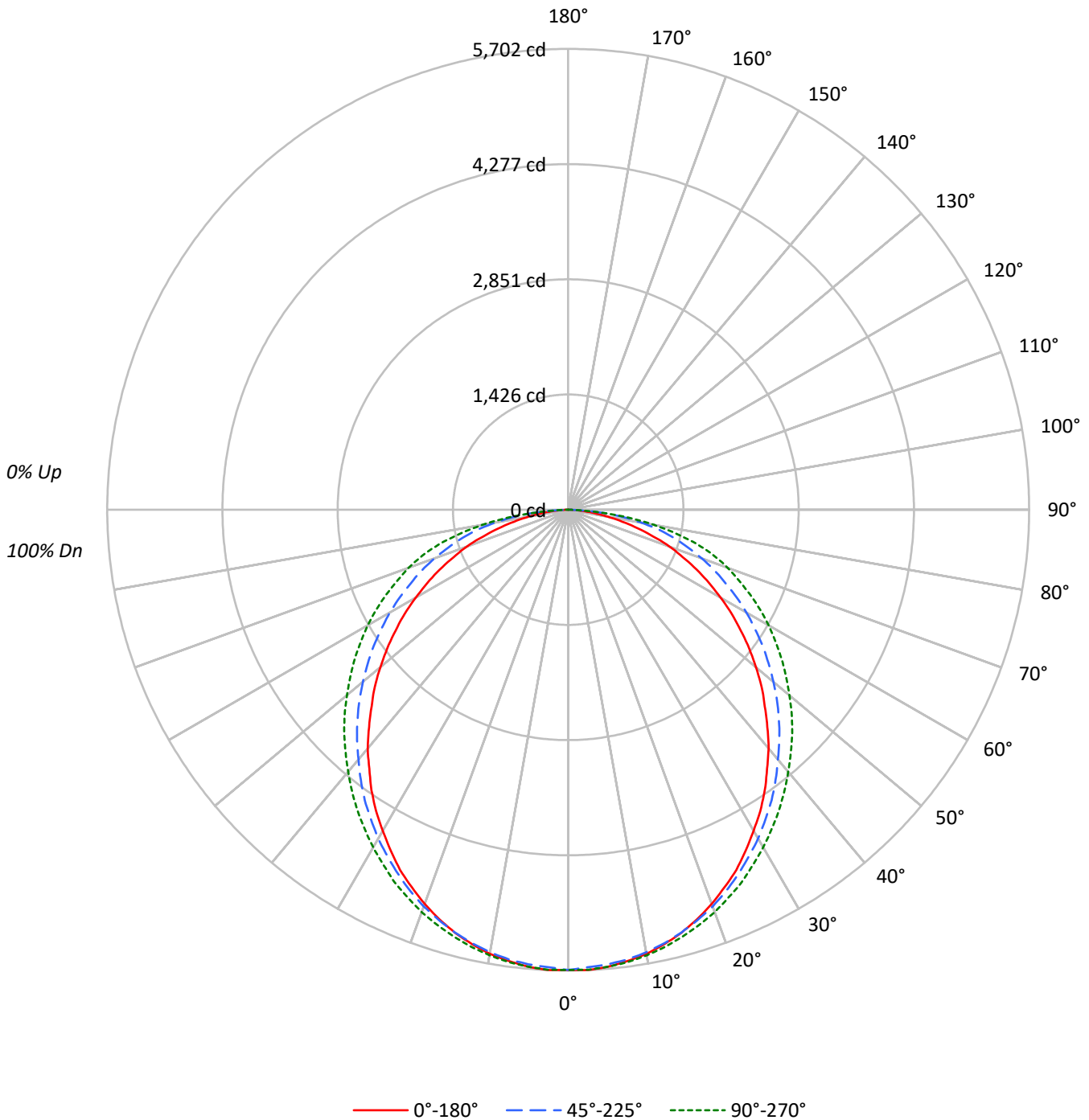
Lumens per Lamp: N/A
Luminaire Lumens: 16478.1 lumens
Efficiency: N/A
Efficacy: 130.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	7661	7661	7661
5°	7666	7626	7666
10°	7623	7598	7649
15°	7546	7542	7617
20°	7433	7478	7585
25°	7303	7386	7549
30°	7126	7300	7494
35°	6966	7206	7464
40°	6775	7088	7434
45°	6545	7016	7456
50°	6347	6938	7478
55°	6114	6888	7562
60°	5860	6856	7701
65°	5585	6831	7899
70°	5257	6901	8263
75°	4622	7044	8594
80°	3857	7096	8292
85°	2754	6082	6164



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	538.3	3.3
10°-20°	1533.2	9.3
20°-30°	2300.1	14.0
30°-40°	2746.1	16.7
40°-50°	2844.5	17.3
50°-60°	2618.6	15.9
60°-70°	2112.4	12.8
70°-80°	1380.2	8.4
80°-90°	404.6	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°	4371.6	26.5
0°-40°	7117.8	43.2
0°-60°	12580.9	76.3
0°-90°	16478.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16478.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5694	5694	5694	5694	5694	
5°	5676	5670	5646	5678	5676	539
15°	5417	5417	5415	5468	5468	1526
25°	4920	4930	4975	5066	5085	2262
35°	4241	4278	4387	4507	4544	2649
45°	3439	3525	3687	3852	3919	2659
55°	2606	2718	2936	3152	3224	2332
65°	1754	1874	2146	2391	2481	1735
75°	889	1057	1355	1589	1653	949
85°	178	309	394	418	399	221
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5694.2	5694.2	5694.2	5694.2	5694.2
2.5°	5702.2	5694.2	5664.9	5699.5	5696.9
5°	5675.6	5670.3	5646.3	5678.2	5675.6
7.5°	5633.0	5630.3	5611.7	5646.3	5646.3
10°	5579.7	5574.4	5561.1	5601.0	5598.4
12.5°	5505.2	5502.5	5494.6	5542.5	5539.8
15°	5417.4	5417.4	5414.7	5467.9	5467.9
17.5°	5310.9	5313.5	5324.2	5385.4	5388.1
20°	5191.1	5201.7	5223.0	5292.2	5297.6
22.5°	5055.3	5076.6	5105.9	5183.1	5191.1
25°	4919.5	4930.2	4975.4	5066.0	5084.6
27.5°	4754.5	4781.1	4839.7	4932.9	4951.5
30°	4586.8	4624.1	4698.6	4794.4	4823.7
32.5°	4421.7	4453.7	4541.5	4650.7	4685.3
35°	4240.7	4278.0	4387.1	4506.9	4544.2
37.5°	4041.1	4099.6	4214.1	4352.5	4392.4
40°	3857.4	3910.6	4035.7	4190.1	4232.7
42.5°	3647.1	3713.6	3865.4	4022.4	4075.7
45°	3439.4	3524.6	3687.0	3852.0	3918.6
47.5°	3245.1	3314.3	3506.0	3692.3	3750.9
50°	3032.1	3112.0	3314.3	3511.3	3572.5
52.5°	2821.8	2917.7	3122.6	3330.3	3396.8
55°	2606.2	2718.0	2936.3	3151.9	3223.8
57.5°	2398.5	2510.4	2736.6	2965.6	3040.1
60°	2177.6	2297.4	2547.6	2768.6	2861.7
62.5°	1964.6	2084.4	2348.0	2587.6	2675.4
65°	1754.3	1874.1	2145.6	2390.6	2481.1
67.5°	1536.0	1666.5	1956.6	2193.6	2281.4
70°	1336.4	1461.5	1754.3	2007.2	2100.4
72.5°	1107.4	1256.5	1554.7	1804.9	1892.7
75°	889.1	1056.8	1355.0	1589.3	1653.2
77.5°	686.8	854.5	1152.7	1328.4	1368.3
80°	497.8	668.2	915.8	1038.2	1070.2
82.5°	322.1	497.8	662.9	745.4	756.0
85°	178.4	308.8	394.0	417.9	399.3
87.5°	63.9	117.1	114.5	93.2	74.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)