

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: P474708

Luminaire Tested: **24CZ2-170VHE-SQR-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474708
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-SQR-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16531.4 lumens
Efficiency: N/A
Efficacy: 130.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

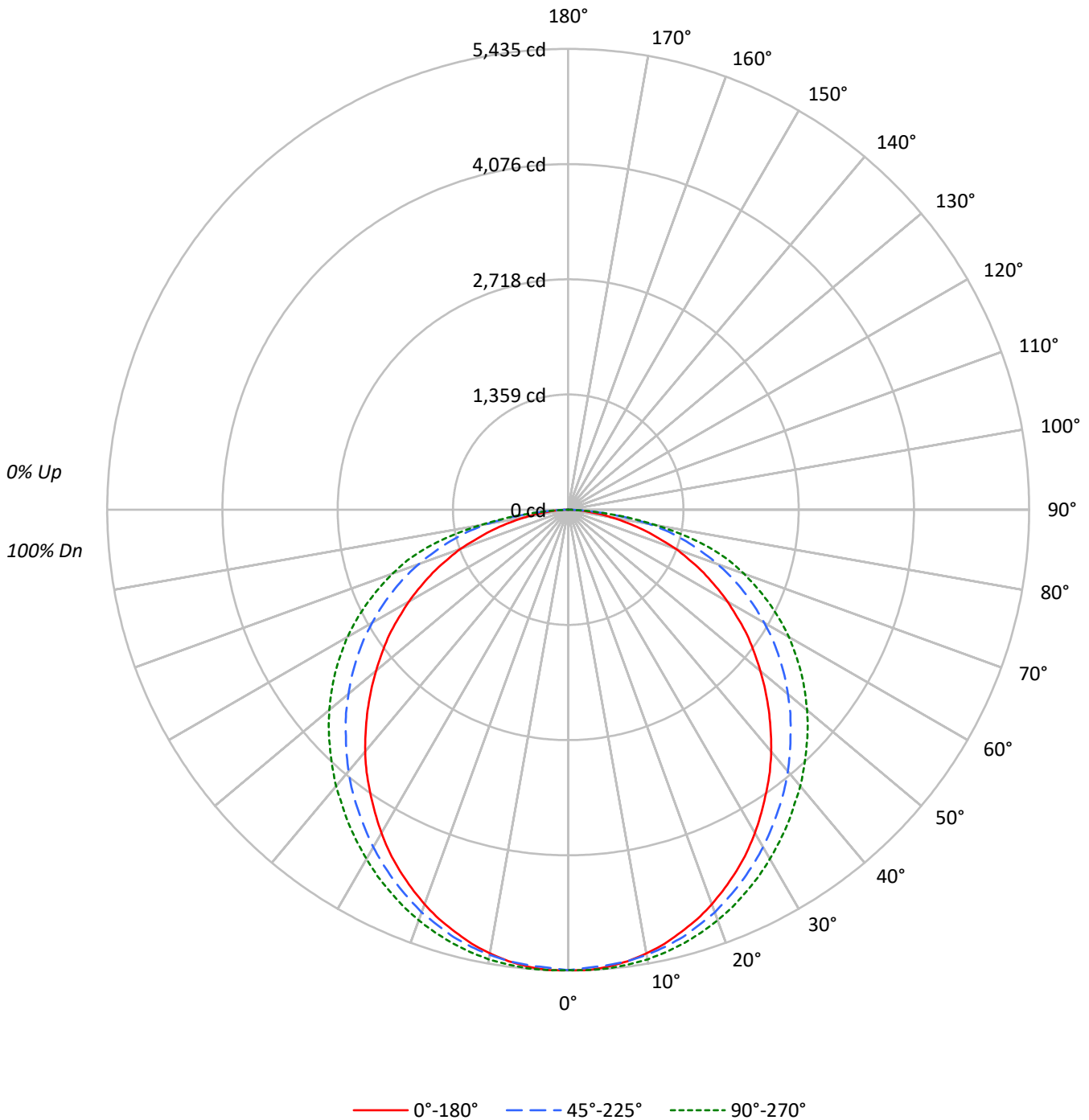
Input Watts (W): 126.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	14612	14612	14612
5°	14611	14568	14668
10°	14520	14570	14715
15°	14362	14539	14738
20°	14181	14468	14756
25°	13951	14366	14758
30°	13680	14279	14780
35°	13370	14194	14836
40°	13081	14148	14955
45°	12724	14112	15117
50°	12383	14153	15391
55°	12093	14249	15736
60°	11684	14356	16175
65°	11217	14530	16665
70°	10639	14733	17330
75°	9528	14938	17904
80°	8021	14979	16248
85°	5953	11334	10683



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	514.6	3.1
10°-20°	1474.7	8.9
20°-30°	2232.5	13.5
30°-40°	2700.6	16.3
40°-50°	2850.7	17.2
50°-60°	2688.3	16.3
60°-70°	2216.3	13.4
70°-80°	1453.9	8.8
80°-90°	399.8	2.4
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°	4221.8	25.5
0°-40°	6922.4	41.9
0°-60°	12461.4	75.4
0°-90°	16531.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16531.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5430	5430	5430	5430	5430	
5°	5409	5409	5393	5430	5430	513
15°	5155	5184	5219	5280	5290	1454
25°	4698	4757	4838	4939	4970	2164
35°	4070	4176	4321	4469	4516	2548
45°	3344	3494	3708	3906	3972	2580
55°	2578	2760	3037	3264	3354	2296
65°	1762	1973	2282	2525	2617	1739
75°	916	1152	1437	1664	1722	968
85°	193	333	367	356	346	239
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5430.0	5430.0	5430.0	5430.0	5430.0
2.5°	5435.3	5430.0	5406.3	5438.0	5435.3
5°	5408.9	5408.9	5393.1	5430.0	5430.0
7.5°	5371.9	5374.6	5369.3	5411.5	5411.5
10°	5313.8	5324.4	5332.3	5379.8	5385.1
12.5°	5245.2	5263.6	5279.5	5337.6	5342.9
15°	5155.4	5184.4	5218.7	5279.5	5290.1
17.5°	5062.9	5097.3	5134.2	5213.5	5226.7
20°	4952.0	4991.6	5052.4	5131.6	5152.7
22.5°	4827.9	4883.3	4946.7	5041.8	5068.2
25°	4698.5	4756.6	4838.4	4938.8	4970.5
27.5°	4558.5	4627.1	4719.6	4835.8	4870.1
30°	4402.7	4481.9	4595.5	4719.6	4756.6
32.5°	4238.9	4331.3	4458.1	4595.5	4637.7
35°	4069.9	4175.5	4320.8	4468.7	4516.2
37.5°	3903.5	4009.1	4180.8	4336.6	4381.5
40°	3723.9	3840.1	4027.6	4194.0	4257.4
42.5°	3533.7	3671.1	3869.2	4054.0	4114.8
45°	3343.6	3494.1	3708.1	3906.1	3972.2
47.5°	3150.8	3317.2	3552.2	3753.0	3829.5
50°	2958.0	3134.9	3380.6	3597.1	3676.4
52.5°	2762.6	2947.4	3214.2	3443.9	3515.3
55°	2577.7	2759.9	3037.2	3264.4	3354.2
57.5°	2363.8	2569.8	2862.9	3092.7	3179.8
60°	2171.0	2371.7	2667.5	2910.5	3005.5
62.5°	1962.3	2168.3	2480.0	2722.9	2815.4
65°	1761.6	1972.9	2281.9	2524.9	2617.3
67.5°	1545.0	1766.9	2083.8	2318.9	2408.7
70°	1352.2	1560.9	1872.5	2112.9	2202.6
72.5°	1117.2	1354.9	1653.3	1891.0	1988.7
75°	916.4	1151.5	1436.7	1663.9	1722.0
77.5°	705.2	940.2	1222.8	1370.7	1410.3
80°	517.6	739.5	966.6	1045.9	1048.5
82.5°	348.6	544.1	673.5	713.1	707.8
85°	192.8	332.8	367.1	356.5	346.0
87.5°	79.2	110.9	89.8	63.4	50.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)