

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: P473908

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473908
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-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

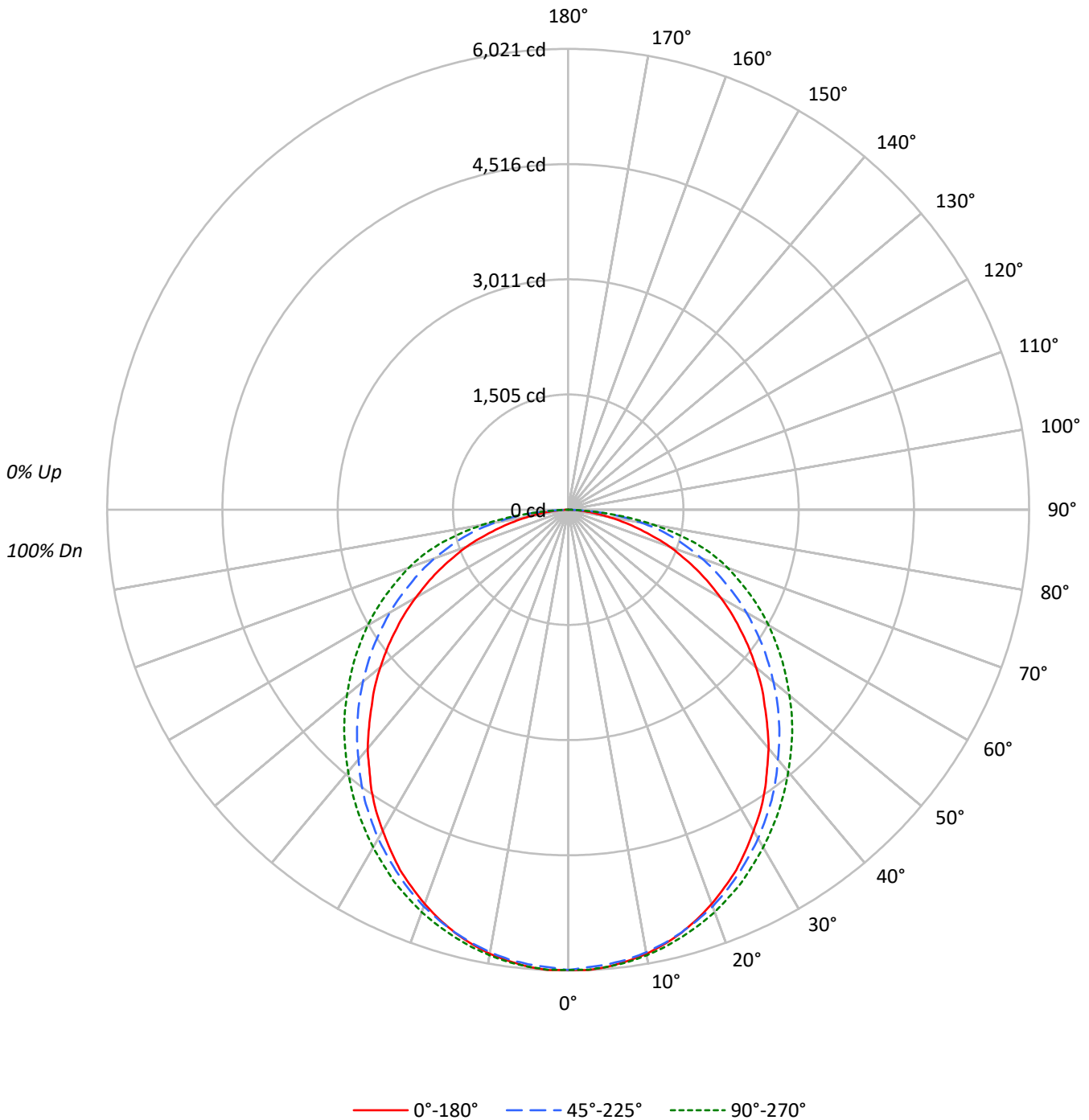
Lumens per Lamp: N/A
Luminaire Lumens: 17400.2 lumens
Efficiency: N/A
Efficacy: 137.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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°	8090	8090	8090
5°	8095	8053	8095
10°	8050	8023	8077
15°	7968	7964	8043
20°	7849	7897	8010
25°	7712	7800	7971
30°	7525	7708	7914
35°	7355	7609	7882
40°	7154	7485	7850
45°	6911	7408	7874
50°	6702	7326	7896
55°	6456	7273	7986
60°	6188	7239	8132
65°	5898	7213	8341
70°	5552	7288	8725
75°	4881	7438	9075
80°	4073	7493	8756
85°	2907	6422	6510



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	568.4	3.3
10°-20°	1619.0	9.3
20°-30°	2428.8	14.0
30°-40°	2899.8	16.7
40°-50°	3003.7	17.3
50°-60°	2765.2	15.9
60°-70°	2230.6	12.8
70°-80°	1457.4	8.4
80°-90°	427.3	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°	4616.3	26.5
0°-40°	7516.1	43.2
0°-60°	13284.9	76.3
0°-90°	17400.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	17400.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	6013	6013	6013	6013	6013	
5°	5993	5988	5962	5996	5993	569
15°	5720	5720	5718	5774	5774	1612
25°	5195	5206	5254	5349	5369	2389
35°	4478	4517	4633	4759	4798	2797
45°	3632	3722	3893	4068	4138	2807
55°	2752	2870	3101	3328	3404	2463
65°	1852	1979	2266	2524	2620	1832
75°	939	1116	1431	1678	1746	1002
85°	188	326	416	441	422	234
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	6012.9	6012.9	6012.9	6012.9	6012.9
2.5°	6021.3	6012.9	5981.9	6018.5	6015.7
5°	5993.2	5987.6	5962.3	5996.0	5993.2
7.5°	5948.2	5945.4	5925.7	5962.3	5962.3
10°	5892.0	5886.4	5872.3	5914.5	5911.7
12.5°	5813.3	5810.5	5802.0	5852.6	5849.8
15°	5720.5	5720.5	5717.7	5773.9	5773.9
17.5°	5608.1	5610.9	5622.1	5686.8	5689.6
20°	5481.6	5492.8	5515.3	5588.4	5594.0
22.5°	5338.2	5360.7	5391.6	5473.1	5481.6
25°	5194.8	5206.1	5253.9	5349.4	5369.1
27.5°	5020.5	5048.7	5110.5	5208.9	5228.6
30°	4843.5	4882.8	4961.5	5062.7	5093.6
32.5°	4669.2	4702.9	4795.7	4910.9	4947.5
35°	4478.0	4517.4	4632.6	4759.1	4798.5
37.5°	4267.2	4329.0	4449.9	4596.1	4638.2
40°	4073.2	4129.4	4261.6	4424.6	4469.6
42.5°	3851.1	3921.4	4081.7	4247.5	4303.7
45°	3631.9	3721.8	3893.3	4067.6	4137.9
47.5°	3426.7	3499.8	3702.2	3898.9	3960.8
50°	3201.8	3286.1	3499.8	3707.8	3772.4
52.5°	2979.7	3080.9	3297.4	3516.6	3586.9
55°	2752.0	2870.1	3100.6	3328.3	3404.2
57.5°	2532.8	2650.8	2889.8	3131.5	3210.2
60°	2299.4	2425.9	2690.2	2923.5	3021.9
62.5°	2074.6	2201.1	2479.4	2732.3	2825.1
65°	1852.5	1979.0	2265.7	2524.3	2619.9
67.5°	1622.0	1759.7	2066.1	2316.3	2409.1
70°	1411.2	1543.3	1852.5	2119.5	2217.9
72.5°	1169.4	1326.8	1641.7	1905.9	1998.7
75°	938.9	1116.0	1430.8	1678.2	1745.7
77.5°	725.3	902.3	1217.2	1402.7	1444.9
80°	525.7	705.6	967.0	1096.3	1130.0
82.5°	340.1	525.7	700.0	787.1	798.3
85°	188.3	326.1	416.0	441.3	421.7
87.5°	67.5	123.7	120.9	98.4	78.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)