

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: P475285

Luminaire Tested: **22CZ2-32-SQR-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475285
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-32-SQR-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

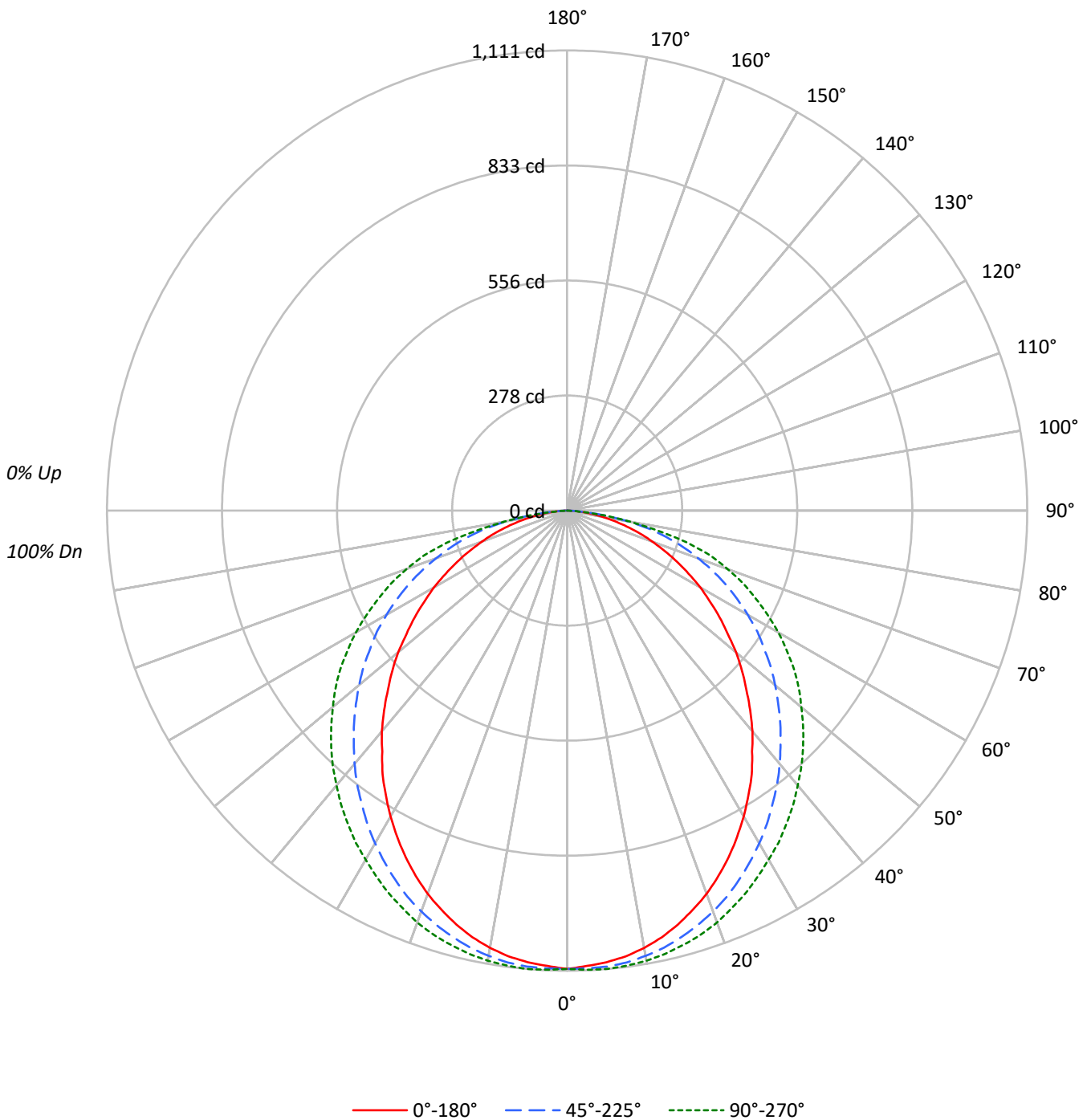
Lumens per Lamp: N/A
Luminaire Lumens: 3167.6 lumens
Efficiency: N/A
Efficacy: 130.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 24.2
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			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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83	83	
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69	69	
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58	58	
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49	49	
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43	43	
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37	37	
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33	33	
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29	29	
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26	26	
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24	24	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2977	2977	2977
5°	2957	2985	3001
10°	2929	2983	3015
15°	2882	2969	3024
20°	2820	2949	3031
25°	2741	2919	3026
30°	2649	2882	3022
35°	2553	2840	3032
40°	2445	2805	3042
45°	2329	2769	3067
50°	2228	2744	3090
55°	2109	2723	3139
60°	1998	2711	3172
65°	1866	2690	3197
70°	1714	2649	3241
75°	1548	2578	3125
80°	1328	2284	2354
85°	1068	1346	1068



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.9	3.3
10°-20°	299.9	9.5
20°-30°	450.5	14.2
30°-40°	537.2	17.0
40°-50°	555.5	17.5
50°-60°	510.7	16.1
60°-70°	406.5	12.8
70°-80°	248.4	7.8
80°-90°	54.0	1.7
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°	855.3	27.0
0°-40°	1392.5	44.0
0°-60°	2458.7	77.6
0°-90°	3167.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3167.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1106	1106	1106	1106	1106	
5°	1094	1098	1105	1110	1111	104
15°	1034	1046	1066	1081	1086	291
25°	923	946	983	1010	1019	425
35°	777	810	864	910	923	485
45°	612	656	728	786	806	473
55°	450	499	580	646	669	402
65°	293	343	422	481	502	290
75°	149	192	248	292	301	159
85°	35	42	44	38	35	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1106.4	1106.4	1106.4	1106.4	1106.4
2.5°	1100.5	1102.0	1106.4	1109.6	1109.6
5°	1094.5	1097.5	1105.0	1109.6	1111.1
7.5°	1085.5	1090.0	1100.5	1106.4	1108.1
10°	1072.0	1078.0	1091.5	1100.5	1103.5
12.5°	1055.4	1064.4	1081.0	1093.0	1096.0
15°	1034.4	1046.4	1065.9	1081.0	1085.5
17.5°	1010.3	1025.3	1049.4	1067.5	1073.5
20°	984.7	999.8	1029.9	1050.9	1058.4
22.5°	954.7	974.2	1008.8	1032.9	1038.9
25°	923.1	945.6	983.2	1010.3	1019.3
27.5°	888.5	915.6	956.2	989.3	996.8
30°	852.4	881.0	927.6	963.7	972.7
32.5°	814.8	847.9	897.5	938.1	950.2
35°	777.2	810.3	864.4	909.6	923.1
37.5°	733.6	772.7	833.0	879.5	896.0
40°	696.0	733.6	798.4	849.4	866.1
42.5°	654.0	694.5	762.3	817.8	837.4
45°	611.9	655.5	727.7	786.4	805.8
47.5°	572.8	616.4	691.6	753.3	772.7
50°	532.2	577.3	655.5	718.7	738.1
52.5°	488.6	538.2	619.4	682.6	705.2
55°	449.5	499.1	580.3	646.5	669.1
57.5°	408.9	460.0	544.3	607.4	628.5
60°	371.3	420.9	503.7	565.3	589.4
62.5°	330.7	381.8	463.0	523.2	545.8
65°	293.1	342.9	422.4	481.1	502.1
67.5°	255.5	305.3	380.3	436.0	460.0
70°	217.9	267.7	336.7	390.9	411.9
72.5°	185.0	228.6	294.6	344.4	363.8
75°	148.9	192.5	248.0	291.6	300.6
77.5°	115.8	154.9	201.5	220.9	224.1
80°	85.7	115.8	147.4	151.9	151.9
82.5°	57.1	79.7	91.7	93.2	91.7
85°	34.6	42.1	43.6	37.6	34.6
87.5°	12.0	12.0	7.5	4.5	1.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)