

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: P475294

Luminaire Tested: **22CZ2-20VHE-SQR-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475294  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20VHE-SQR-UNV-L840-CD1-U  
Description: 2'X2' 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: 1971.0 lumens  
Efficiency: N/A  
Efficacy: 142.8 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

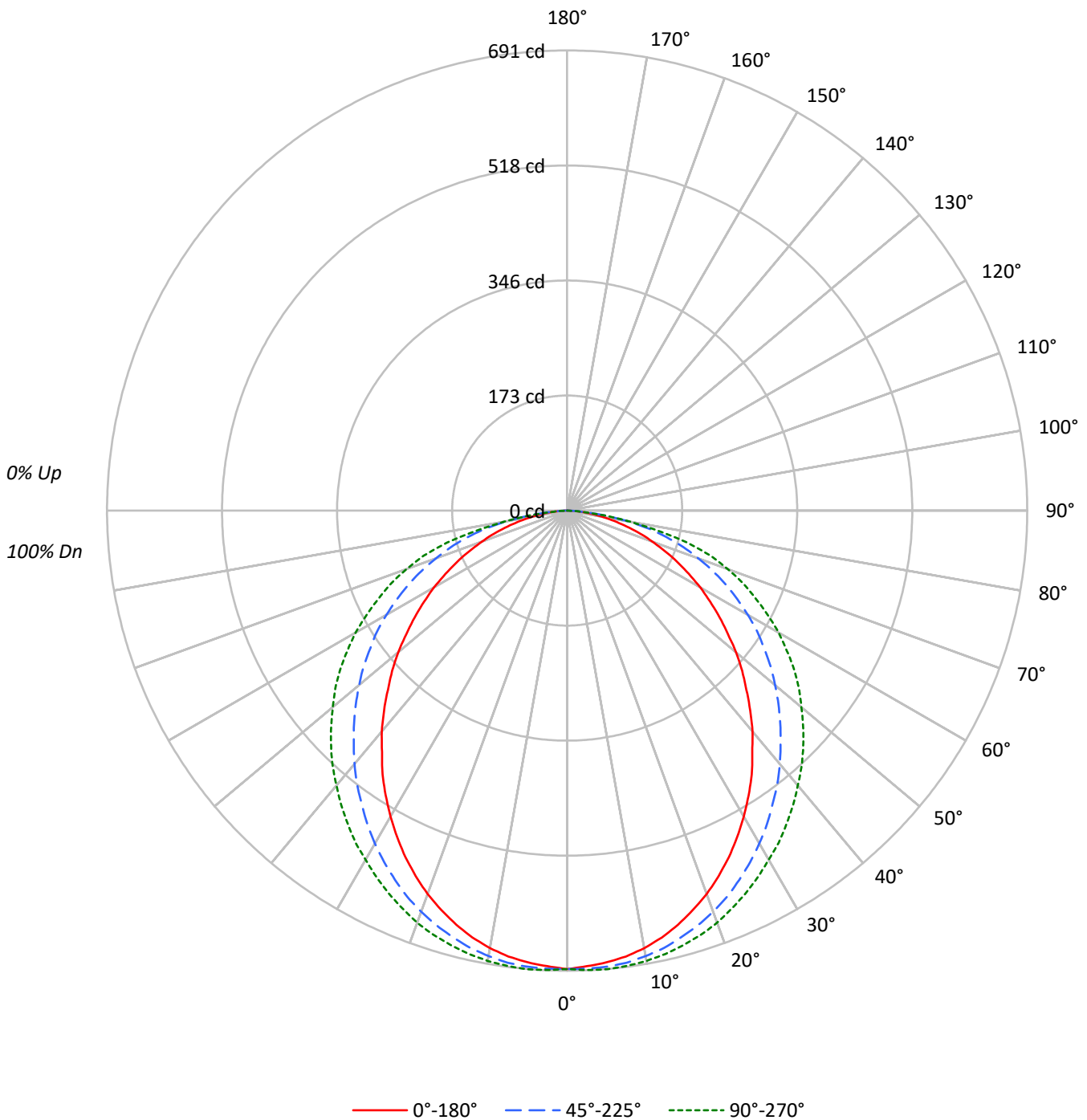
Input Watts (W): 13.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1853	1853	1853
5°	1840	1857	1868
10°	1823	1856	1876
15°	1793	1848	1882
20°	1755	1835	1886
25°	1705	1817	1883
30°	1648	1794	1881
35°	1589	1767	1887
40°	1521	1745	1893
45°	1449	1723	1908
50°	1386	1708	1923
55°	1312	1694	1953
60°	1243	1687	1974
65°	1161	1673	1989
70°	1067	1648	2017
75°	963	1604	1945
80°	826	1421	1464
85°	664	837	664



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.3	3.3
10°-20°	186.6	9.5
20°-30°	280.3	14.2
30°-40°	334.3	17.0
40°-50°	345.6	17.5
50°-60°	317.8	16.1
60°-70°	253.0	12.8
70°-80°	154.6	7.8
80°-90°	33.6	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°	532.2	27.0
0°-40°	866.5	44.0
0°-60°	1529.9	77.6
0°-90°	1971.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1971.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	688	688	688	688	688	
5°	681	683	688	690	691	65
15°	644	651	663	673	675	181
25°	574	588	612	629	634	264
35°	484	504	538	566	574	302
45°	381	408	453	489	501	294
55°	280	310	361	402	416	250
65°	182	213	263	299	312	181
75°	93	120	154	182	187	99
85°	22	26	27	23	22	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	688.5	688.5	688.5	688.5	688.5
2.5°	684.8	685.7	688.5	690.5	690.5
5°	681.0	682.9	687.6	690.5	691.4
7.5°	675.4	678.2	684.8	688.5	689.5
10°	667.1	670.8	679.2	684.8	686.6
12.5°	656.7	662.3	672.6	680.1	682.0
15°	643.7	651.1	663.2	672.6	675.4
17.5°	628.7	638.0	653.0	664.3	668.0
20°	612.7	622.1	640.9	653.9	658.6
22.5°	594.1	606.2	627.7	642.7	646.5
25°	574.4	588.4	611.8	628.7	634.2
27.5°	552.9	569.8	595.0	615.6	620.3
30°	530.4	548.2	577.2	599.7	605.3
32.5°	507.0	527.6	558.5	583.7	591.3
35°	483.6	504.2	537.9	566.0	574.4
37.5°	456.5	480.8	518.3	547.3	557.5
40°	433.1	456.5	496.8	528.6	538.9
42.5°	406.9	432.2	474.3	508.9	521.1
45°	380.7	407.9	452.8	489.3	501.4
47.5°	356.4	383.5	430.3	468.7	480.8
50°	331.1	359.2	407.9	447.2	459.3
52.5°	304.0	334.9	385.4	424.7	438.8
55°	279.7	310.5	361.1	402.3	416.3
57.5°	254.4	286.2	338.7	377.9	391.1
60°	231.0	261.9	313.4	351.7	366.8
62.5°	205.8	237.6	288.1	325.6	339.6
65°	182.4	213.3	262.8	299.4	312.4
67.5°	159.0	190.0	236.6	271.3	286.2
70°	135.6	166.6	209.5	243.3	256.3
72.5°	115.1	142.2	183.3	214.3	226.4
75°	92.6	119.8	154.3	181.5	187.1
77.5°	72.0	96.4	125.4	137.5	139.4
80°	53.3	72.0	91.7	94.5	94.5
82.5°	35.5	49.6	57.0	58.0	57.0
85°	21.5	26.2	27.1	23.4	21.5
87.5°	7.5	7.5	4.7	2.8	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)