

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: P475225

Luminaire Tested: **22CZ2-20-SQR-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475225  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-20-SQR-UNV-L830-CD1-U  
Description: 2'X2' TROFFER LED MODULE, SQUARE LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

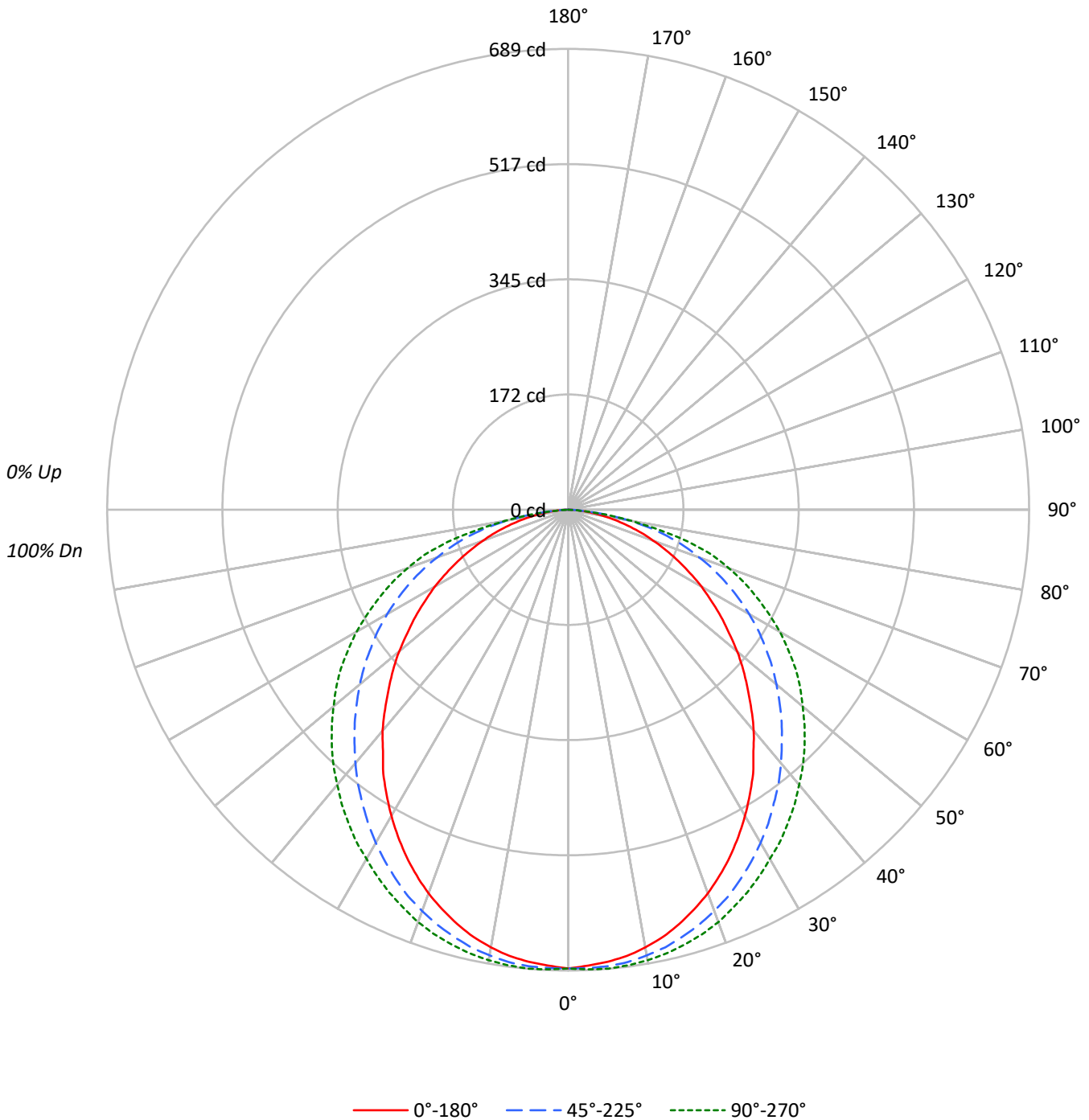
Lumens per Lamp: N/A  
Luminaire Lumens: 1963.8 lumens  
Efficiency: N/A  
Efficacy: 121.2 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 16.2  
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	
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°	1846	1846	1846
5°	1833	1850	1861
10°	1816	1849	1869
15°	1787	1841	1875
20°	1748	1828	1879
25°	1699	1810	1876
30°	1642	1787	1874
35°	1583	1760	1880
40°	1516	1738	1886
45°	1443	1717	1901
50°	1381	1701	1916
55°	1308	1688	1946
60°	1239	1681	1967
65°	1157	1668	1982
70°	1063	1642	2009
75°	960	1599	1938
80°	823	1416	1460
85°	664	834	664



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.0	3.3
10°-20°	185.9	9.5
20°-30°	279.3	14.2
30°-40°	333.1	17.0
40°-50°	344.4	17.5
50°-60°	316.6	16.1
60°-70°	252.1	12.8
70°-80°	154.0	7.8
80°-90°	33.5	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°	530.2	27.0
0°-40°	863.3	44.0
0°-60°	1524.3	77.6
0°-90°	1963.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1963.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	686	686	686	686	686	
5°	678	680	685	688	689	64
15°	641	649	661	670	673	181
25°	572	586	610	626	632	263
35°	482	502	536	564	572	301
45°	379	406	451	488	500	293
55°	279	309	360	401	415	249
65°	182	213	262	298	311	180
75°	92	119	154	181	186	98
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°	685.9	685.9	685.9	685.9	685.9
2.5°	682.2	683.2	685.9	687.9	687.9
5°	678.5	680.4	685.0	687.9	688.8
7.5°	673.0	675.7	682.2	685.9	687.0
10°	664.6	668.3	676.7	682.2	684.1
12.5°	654.3	659.9	670.2	677.6	679.4
15°	641.3	648.7	660.8	670.2	673.0
17.5°	626.3	635.6	650.6	661.8	665.5
20°	610.5	619.8	638.5	651.5	656.1
22.5°	591.9	604.0	625.4	640.4	644.1
25°	572.3	586.2	609.5	626.3	631.9
27.5°	550.8	567.7	592.8	613.3	618.0
30°	528.5	546.2	575.1	597.5	603.0
32.5°	505.2	525.7	556.4	581.6	589.1
35°	481.8	502.4	535.9	563.9	572.3
37.5°	454.8	479.1	516.4	545.3	555.5
40°	431.5	454.8	494.9	526.6	536.9
42.5°	405.4	430.6	472.6	507.0	519.2
45°	379.3	406.3	451.1	487.5	499.6
47.5°	355.1	382.1	428.7	467.0	479.1
50°	329.9	357.9	406.3	445.5	457.6
52.5°	302.9	333.6	384.0	423.2	437.2
55°	278.7	309.4	359.7	400.8	414.8
57.5°	253.5	285.2	337.5	376.5	389.6
60°	230.2	260.9	312.3	350.5	365.4
62.5°	205.0	236.7	287.0	324.4	338.4
65°	181.7	212.6	261.9	298.3	311.3
67.5°	158.4	189.3	235.8	270.3	285.2
70°	135.1	165.9	208.7	242.4	255.4
72.5°	114.7	141.7	182.7	213.5	225.6
75°	92.3	119.3	153.8	180.8	186.4
77.5°	71.8	96.0	124.9	137.0	138.9
80°	53.1	71.8	91.4	94.2	94.2
82.5°	35.4	49.4	56.8	57.8	56.8
85°	21.5	26.1	27.0	23.3	21.5
87.5°	7.4	7.4	4.6	2.8	0.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)