

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: P475309

Luminaire Tested: **22CZ2-100VHE-SQR-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475309  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-100VHE-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: 9701.2 lumens  
Efficiency: N/A  
Efficacy: 128.0 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

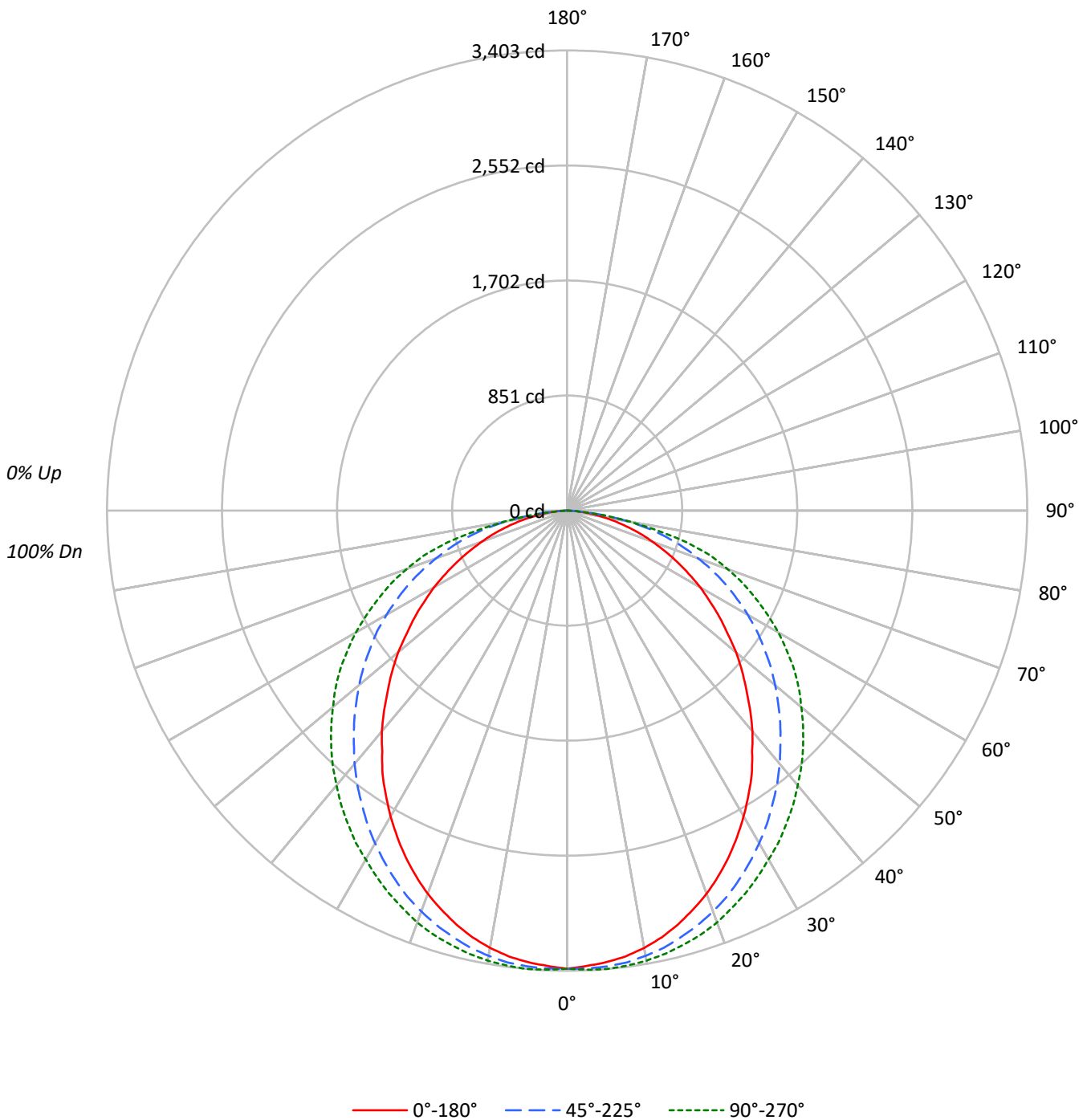
Input Watts (W): 75.8  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	9119	9119	9119
5°	9055	9141	9192
10°	8971	9134	9234
15°	8826	9094	9262
20°	8636	9033	9282
25°	8394	8940	9269
30°	8112	8828	9257
35°	7820	8697	9288
40°	7488	8589	9317
45°	7131	8481	9392
50°	6823	8404	9464
55°	6459	8337	9614
60°	6120	8303	9715
65°	5716	8237	9791
70°	5251	8113	9925
75°	4741	7899	9573
80°	4066	6995	7209
85°	3273	4122	3273



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	321.3	3.3
10°-20°	918.6	9.5
20°-30°	1379.6	14.2
30°-40°	1645.4	17.0
40°-50°	1701.2	17.5
50°-60°	1564.0	16.1
60°-70°	1245.1	12.8
70°-80°	760.7	7.8
80°-90°	165.3	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°	2619.5	27.0
0°-40°	4264.8	44.0
0°-60°	7530.0	77.6
0°-90°	9701.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9701.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3389	3389	3389	3389	3389	
5°	3352	3361	3384	3398	3403	318
15°	3168	3205	3264	3311	3324	892
25°	2827	2896	3011	3094	3122	1300
35°	2380	2482	2647	2786	2827	1485
45°	1874	2007	2228	2408	2468	1449
55°	1377	1528	1777	1980	2049	1231
65°	898	1050	1294	1474	1538	889
75°	456	590	760	893	921	486
85°	106	129	134	115	106	122
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3388.7	3388.7	3388.7	3388.7	3388.7
2.5°	3370.3	3374.9	3388.7	3398.3	3398.3
5°	3352.0	3361.2	3384.1	3398.3	3402.9
7.5°	3324.5	3338.2	3370.3	3388.7	3393.8
10°	3283.2	3301.5	3342.8	3370.3	3379.5
12.5°	3232.3	3259.8	3310.7	3347.4	3356.6
15°	3168.1	3204.7	3264.3	3310.7	3324.5
17.5°	3094.2	3140.0	3213.9	3269.4	3287.8
20°	3015.7	3062.1	3154.3	3218.5	3241.4
22.5°	2924.0	2983.6	3089.6	3163.5	3181.8
25°	2827.2	2896.0	3011.1	3094.2	3121.7
27.5°	2721.2	2804.3	2928.6	3030.0	3052.9
30°	2610.7	2698.3	2841.0	2951.5	2979.0
32.5°	2495.5	2596.9	2748.7	2873.1	2910.2
35°	2380.4	2481.8	2647.3	2785.9	2827.2
37.5°	2246.9	2366.6	2551.1	2693.7	2744.2
40°	2131.7	2246.9	2445.1	2601.5	2652.4
42.5°	2002.8	2127.2	2334.5	2504.7	2564.8
45°	1873.9	2007.4	2228.5	2408.4	2468.0
47.5°	1754.2	1887.7	2118.0	2307.0	2366.6
50°	1629.9	1768.0	2007.4	2201.0	2260.6
52.5°	1496.4	1648.2	1896.9	2090.5	2159.8
55°	1376.7	1528.5	1777.1	1979.9	2049.2
57.5°	1252.3	1408.8	1667.1	1860.2	1924.9
60°	1137.2	1289.0	1542.8	1731.3	1805.1
62.5°	1012.9	1169.3	1417.9	1602.4	1671.7
65°	897.7	1050.1	1293.6	1473.5	1537.7
67.5°	782.6	934.9	1164.7	1335.4	1408.8
70°	667.4	819.8	1031.2	1197.3	1261.5
72.5°	566.6	700.0	902.3	1054.7	1114.3
75°	456.0	589.5	759.7	893.1	920.7
77.5°	354.6	474.3	617.0	676.6	686.3
80°	262.4	354.6	451.4	465.2	465.2
82.5°	174.8	244.0	280.7	285.3	280.7
85°	106.0	128.9	133.5	115.1	106.0
87.5°	36.7	36.7	22.9	13.8	4.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)