

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: P475252

Luminaire Tested: **22CZ2-105VHE-SQR-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475252  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-105VHE-SQR-UNV-L830-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9654.6 lumens  
Efficiency: N/A  
Efficacy: 121.4 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

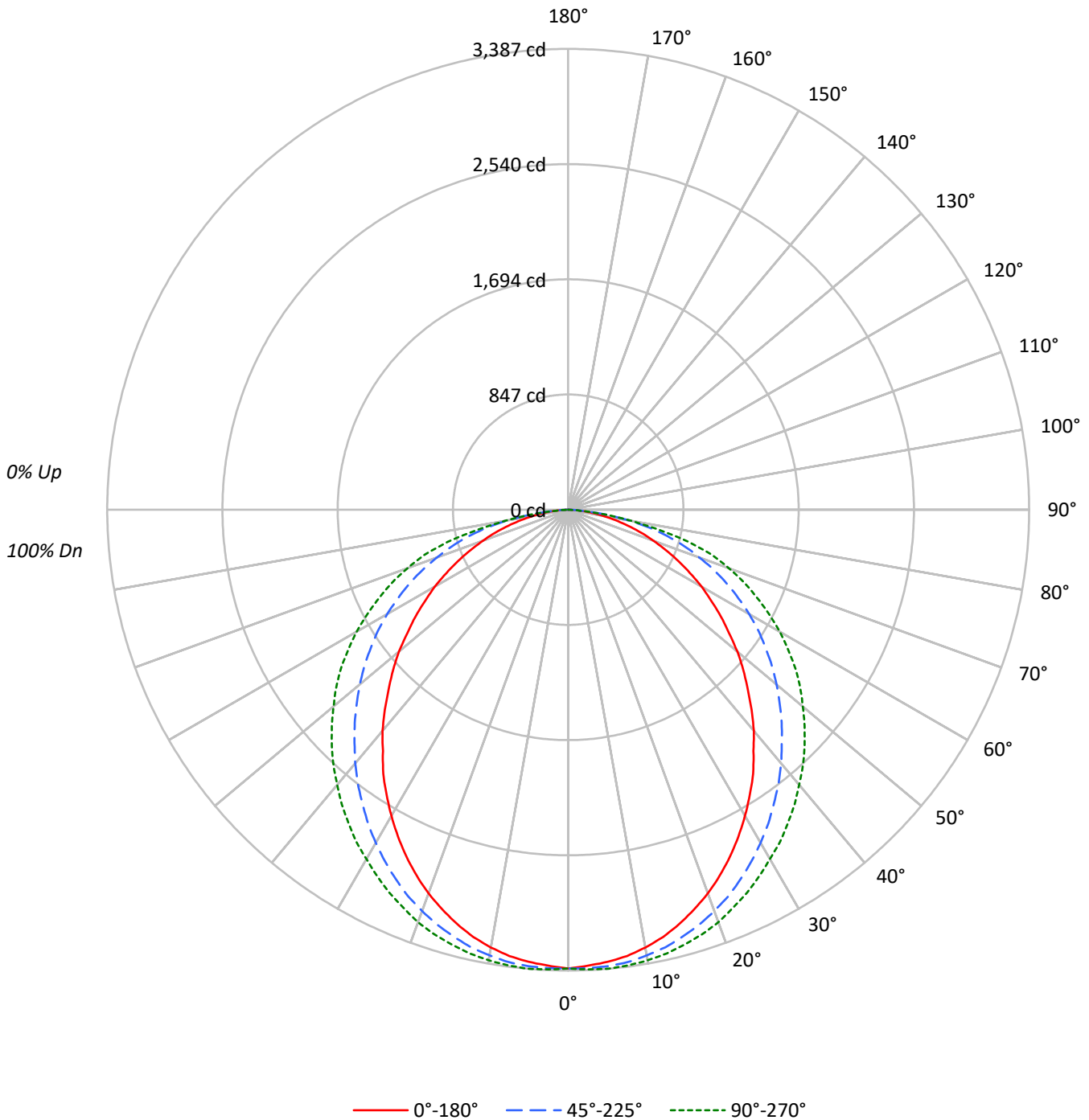
Input Watts (W): 79.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	9075	9075	9075
5°	9011	9097	9148
10°	8928	9090	9190
15°	8784	9051	9217
20°	8594	8990	9238
25°	8354	8898	9224
30°	8073	8785	9212
35°	7782	8655	9243
40°	7452	8548	9273
45°	7097	8440	9347
50°	6791	8364	9419
55°	6428	8298	9568
60°	6091	8263	9669
65°	5689	8197	9744
70°	5226	8075	9878
75°	4718	7860	9526
80°	4046	6961	7173
85°	3257	4100	3257



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	319.7	3.3
10°-20°	914.2	9.5
20°-30°	1373.0	14.2
30°-40°	1637.5	17.0
40°-50°	1693.0	17.5
50°-60°	1556.5	16.1
60°-70°	1239.1	12.8
70°-80°	757.1	7.8
80°-90°	164.5	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°	2606.9	27.0
0°-40°	4244.4	44.0
0°-60°	7493.9	77.6
0°-90°	9654.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9654.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3372	3372	3372	3372	3372	
5°	3336	3345	3368	3382	3387	316
15°	3153	3189	3249	3295	3308	888
25°	2814	2882	2997	3079	3107	1294
35°	2369	2470	2635	2773	2814	1478
45°	1865	1998	2218	2397	2456	1442
55°	1370	1521	1769	1970	2039	1225
65°	893	1045	1287	1466	1530	885
75°	454	587	756	889	916	483
85°	106	128	133	115	106	121
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3372.4	3372.4	3372.4	3372.4	3372.4
2.5°	3354.2	3358.7	3372.4	3382.0	3382.0
5°	3335.9	3345.0	3367.8	3382.0	3386.6
7.5°	3308.5	3322.2	3354.2	3372.4	3377.5
10°	3267.5	3285.7	3326.8	3354.2	3363.3
12.5°	3216.7	3244.1	3294.8	3331.3	3340.5
15°	3152.9	3189.4	3248.7	3294.8	3308.5
17.5°	3079.3	3125.0	3198.5	3253.8	3272.0
20°	3001.2	3047.4	3139.2	3203.1	3225.9
22.5°	2910.0	2969.3	3074.8	3148.3	3166.5
25°	2813.6	2882.1	2996.7	3079.3	3106.7
27.5°	2708.2	2790.8	2914.5	3015.4	3038.3
30°	2598.1	2685.4	2827.3	2937.4	2964.7
32.5°	2483.5	2584.5	2735.6	2859.3	2896.3
35°	2369.0	2469.9	2634.6	2772.6	2813.6
37.5°	2236.1	2355.3	2538.8	2680.8	2731.0
40°	2121.5	2236.1	2433.3	2589.0	2639.7
42.5°	1993.2	2116.9	2323.3	2492.7	2552.5
45°	1864.9	1997.8	2217.9	2396.8	2456.2
47.5°	1745.8	1878.6	2107.8	2295.9	2355.3
50°	1622.1	1759.5	1997.8	2190.5	2249.8
52.5°	1489.2	1640.3	1887.8	2080.4	2149.4
55°	1370.1	1521.2	1768.6	1970.4	2039.4
57.5°	1246.3	1402.0	1659.1	1851.3	1915.6
60°	1131.7	1282.8	1535.4	1723.0	1796.5
62.5°	1008.0	1163.7	1411.1	1594.7	1663.6
65°	893.4	1045.0	1287.4	1466.4	1530.3
67.5°	778.8	930.4	1159.1	1329.0	1402.0
70°	664.2	815.8	1026.3	1191.6	1255.5
72.5°	563.8	696.7	898.0	1049.6	1108.9
75°	453.8	586.7	756.0	888.9	916.2
77.5°	352.9	472.1	614.0	673.4	683.0
80°	261.1	352.9	449.2	462.9	462.9
82.5°	173.9	242.9	279.4	283.9	279.4
85°	105.5	128.3	132.8	114.6	105.5
87.5°	36.5	36.5	22.8	13.7	4.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)