

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: P474904

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

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474904  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-105VHE-S-UNV-L830-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10366.3 lumens  
Efficiency: N/A  
Efficacy: 130.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

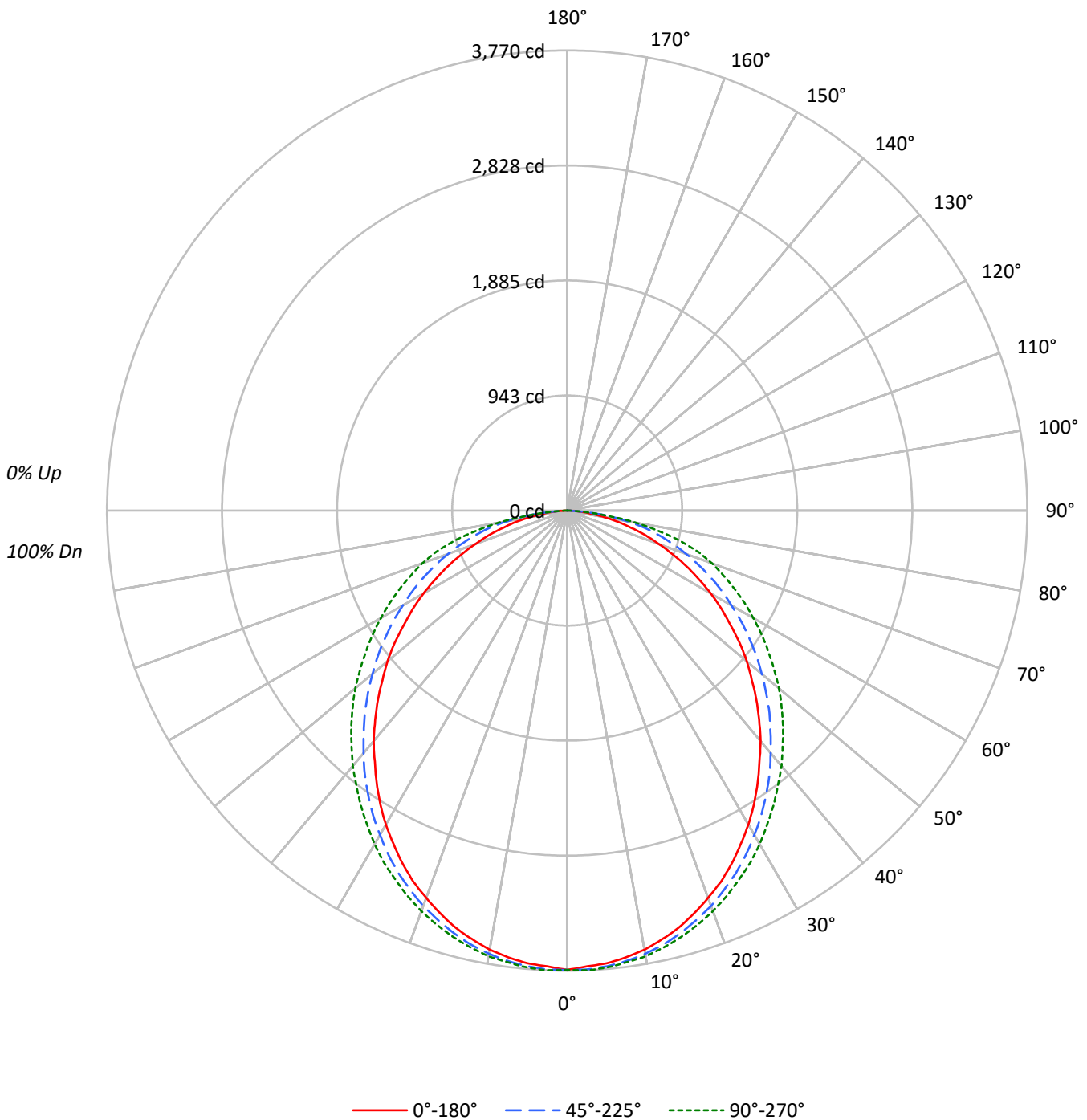
Input Watts (W): 79.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P474904

CATALOG NUMBER: 22CZ2-105VHE-S-UNV-L830-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P474904

CATALOG NUMBER: 22CZ2-105VHE-S-UNV-L830-CD1-U

**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	88	86	83
2	99	90	83	77	96	88	82	77	85	79	75		81	77	73		78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63		72	66	61		69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53		64	58	53		62	56	52	50
5	76	63	54	47	74	62	53	47	59	52	46		57	51	46		56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40		52	45	40		50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36		47	41	36		46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32		43	37	32		42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29		40	33	29		39	33	29	27
10	53	40	32	26	52	39	32	26	38	31	26		37	31	26		36	30	26	24

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

	0°	45°	90°
0°	10126	10126	10126
5°	10056	10124	10151
10°	9981	10077	10132
15°	9854	9987	10071
20°	9670	9871	10000
25°	9475	9720	9899
30°	9229	9533	9806
35°	8942	9337	9683
40°	8663	9112	9597
45°	8344	8917	9518
50°	8045	8717	9483
55°	7662	8545	9439
60°	7318	8371	9478
65°	6869	8274	9616
70°	6276	8172	9928
75°	5634	8112	9938
80°	4744	7658	8825
85°	3563	5190	4801



TEST NUMBER: P474904

CATALOG NUMBER: 22CZ2-105VHE-S-UNV-L830-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	355.4	3.4
10°-20°	1009.4	9.7
20°-30°	1504.9	14.5
30°-40°	1775.8	17.1
40°-50°	1809.2	17.5
50°-60°	1631.6	15.7
60°-70°	1281.4	12.4
70°-80°	801.1	7.7
80°-90°	197.5	1.9
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°	2869.7	27.7
0°-40°	4645.4	44.8
0°-60°	8086.3	78.0
0°-90°	10366.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10366.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3763	3763	3763	3763	3763	
5°	3723	3730	3748	3755	3758	353
15°	3537	3550	3585	3610	3615	996
25°	3191	3208	3274	3321	3334	1468
35°	2722	2760	2842	2920	2948	1702
45°	2192	2230	2343	2456	2501	1691
55°	1633	1686	1821	1962	2012	1465
65°	1079	1136	1300	1445	1510	1065
75°	542	617	780	913	956	579
85°	115	148	168	166	156	141
90°	0	0	0	0	0	



TEST NUMBER: P474904

CATALOG NUMBER: 22CZ2-105VHE-S-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3762.9	3762.9	3762.9	3762.9	3762.9
2.5°	3737.9	3745.4	3762.9	3770.5	3770.5
5°	3722.8	3730.3	3747.9	3755.4	3757.9
7.5°	3692.7	3702.7	3722.8	3732.8	3732.8
10°	3652.6	3665.1	3687.7	3702.7	3707.8
12.5°	3597.4	3612.4	3642.5	3660.1	3665.1
15°	3537.2	3549.7	3584.8	3609.9	3614.9
17.5°	3459.4	3479.5	3517.1	3549.7	3557.2
20°	3376.6	3399.2	3446.9	3484.5	3492.0
22.5°	3291.3	3308.9	3361.6	3406.7	3416.8
25°	3191.0	3208.5	3273.8	3321.4	3334.0
27.5°	3080.6	3110.7	3175.9	3231.1	3251.2
30°	2970.2	3000.3	3068.1	3133.3	3155.9
32.5°	2849.8	2882.4	2960.2	3027.9	3050.5
35°	2721.9	2759.5	2842.3	2920.0	2947.6
37.5°	2588.9	2631.6	2724.4	2807.2	2837.3
40°	2466.0	2496.1	2593.9	2689.3	2731.9
42.5°	2328.0	2368.1	2466.0	2573.9	2614.0
45°	2192.5	2230.2	2343.1	2455.9	2501.1
47.5°	2052.1	2099.7	2212.6	2338.0	2383.2
50°	1921.6	1961.7	2082.2	2215.1	2265.3
52.5°	1781.1	1823.8	1954.2	2092.2	2137.4
55°	1633.1	1685.8	1821.3	1961.7	2011.9
57.5°	1497.7	1547.8	1690.8	1836.3	1889.0
60°	1359.7	1409.9	1555.4	1703.4	1761.1
62.5°	1214.2	1271.9	1429.9	1572.9	1638.1
65°	1078.7	1136.4	1299.5	1445.0	1510.2
67.5°	935.7	1003.5	1166.5	1319.5	1384.8
70°	797.7	878.0	1038.6	1189.1	1261.8
72.5°	674.8	740.0	908.1	1066.2	1126.4
75°	541.9	617.1	780.2	913.1	955.8
77.5°	429.0	494.2	649.7	737.5	765.1
80°	306.1	378.8	494.2	546.9	569.5
82.5°	203.2	263.4	336.2	346.2	341.2
85°	115.4	148.0	168.1	165.6	155.5
87.5°	45.2	50.2	37.6	22.6	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)