

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: P474962

Luminaire Tested: **22CZ2-105VHE-S-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474962  
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-L840-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10946.3 lumens  
Efficiency: N/A  
Efficacy: 137.7 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

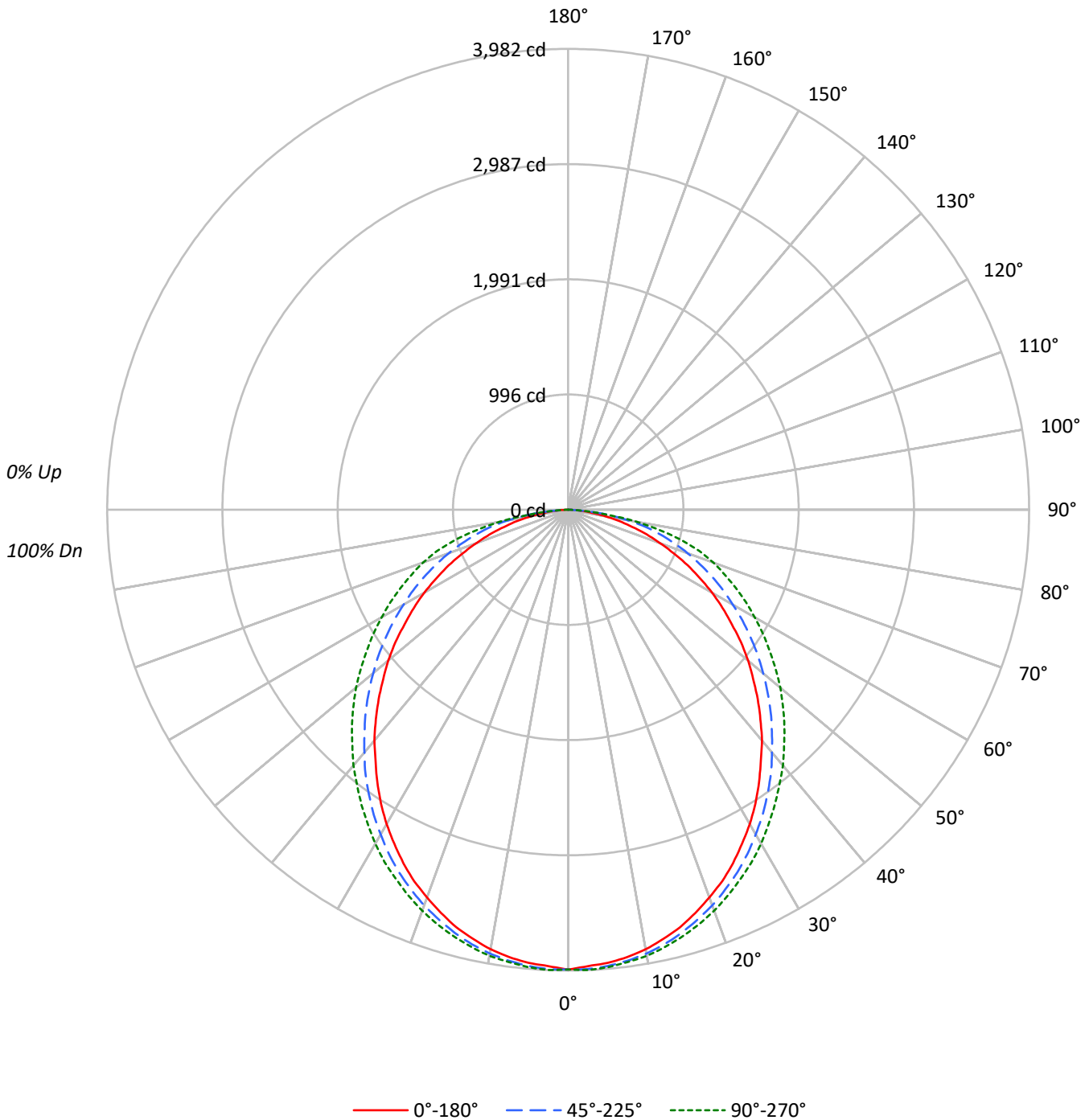
Input Watts (W): 79.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	10693	10693	10693
5°	10619	10690	10719
10°	10539	10640	10698
15°	10406	10546	10634
20°	10211	10423	10560
25°	10005	10264	10453
30°	9746	10067	10355
35°	9442	9860	10225
40°	9147	9622	10134
45°	8811	9416	10051
50°	8495	9205	10014
55°	8091	9023	9967
60°	7727	8839	10008
65°	7253	8737	10154
70°	6628	8629	10484
75°	5949	8565	10494
80°	5009	8088	9318
85°	3764	5480	5070



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	375.3	3.4
10°-20°	1065.9	9.7
20°-30°	1589.1	14.5
30°-40°	1875.1	17.1
40°-50°	1910.4	17.5
50°-60°	1722.9	15.7
60°-70°	1353.1	12.4
70°-80°	845.9	7.7
80°-90°	208.5	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°	3030.3	27.7
0°-40°	4905.4	44.8
0°-60°	8538.8	78.0
0°-90°	10946.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10946.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3974	3974	3974	3974	3974	
5°	3931	3939	3958	3966	3968	373
15°	3735	3748	3785	3812	3817	1052
25°	3370	3388	3457	3507	3520	1550
35°	2874	2914	3001	3083	3113	1798
45°	2315	2355	2474	2593	2641	1786
55°	1724	1780	1923	2072	2124	1547
65°	1139	1200	1372	1526	1595	1125
75°	572	652	824	964	1009	612
85°	122	156	178	175	164	148
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3973.5	3973.5	3973.5	3973.5	3973.5
2.5°	3947.0	3955.0	3973.5	3981.5	3981.5
5°	3931.1	3939.1	3957.6	3965.6	3968.2
7.5°	3899.3	3909.9	3931.1	3941.7	3941.7
10°	3857.0	3870.2	3894.0	3909.9	3915.2
12.5°	3798.7	3814.6	3846.4	3864.9	3870.2
15°	3735.1	3748.3	3785.4	3811.9	3817.2
17.5°	3653.0	3674.2	3713.9	3748.3	3756.3
20°	3565.6	3589.4	3639.7	3679.5	3687.4
22.5°	3475.5	3494.0	3549.7	3597.4	3608.0
25°	3369.5	3388.1	3457.0	3507.3	3520.5
27.5°	3253.0	3284.8	3353.6	3411.9	3433.1
30°	3136.4	3168.2	3239.7	3308.6	3332.5
32.5°	3009.3	3043.7	3125.8	3197.4	3221.2
35°	2874.2	2913.9	3001.3	3083.4	3112.6
37.5°	2733.8	2778.8	2876.8	2964.2	2996.0
40°	2604.0	2635.8	2739.1	2839.7	2884.8
42.5°	2458.3	2500.7	2604.0	2717.9	2760.3
45°	2315.2	2355.0	2474.2	2593.4	2641.1
47.5°	2166.9	2217.2	2336.4	2468.9	2516.6
50°	2029.1	2071.5	2198.7	2339.1	2392.1
52.5°	1880.8	1925.8	2063.6	2209.3	2257.0
55°	1724.5	1780.1	1923.2	2071.5	2124.5
57.5°	1581.5	1634.4	1785.4	1939.1	1994.7
60°	1435.8	1488.7	1642.4	1798.7	1859.6
62.5°	1282.1	1343.0	1509.9	1660.9	1729.8
65°	1139.1	1200.0	1372.2	1525.8	1594.7
67.5°	988.1	1059.6	1231.8	1393.4	1462.3
70°	842.4	927.2	1096.7	1255.6	1332.5
72.5°	712.6	781.5	958.9	1125.8	1189.4
75°	572.2	651.7	823.8	964.2	1009.3
77.5°	453.0	521.9	686.1	778.8	807.9
80°	323.2	400.0	521.9	577.5	601.3
82.5°	214.6	278.1	355.0	365.6	360.3
85°	121.9	156.3	177.5	174.8	164.2
87.5°	47.7	53.0	39.7	23.8	18.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)