

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: P473947

Luminaire Tested: **24CZ2-115VHE-UNV-L850-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P473947  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-115VHE-UNV-L850-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11728.5 lumens  
Efficiency: N/A  
Efficacy: 145.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

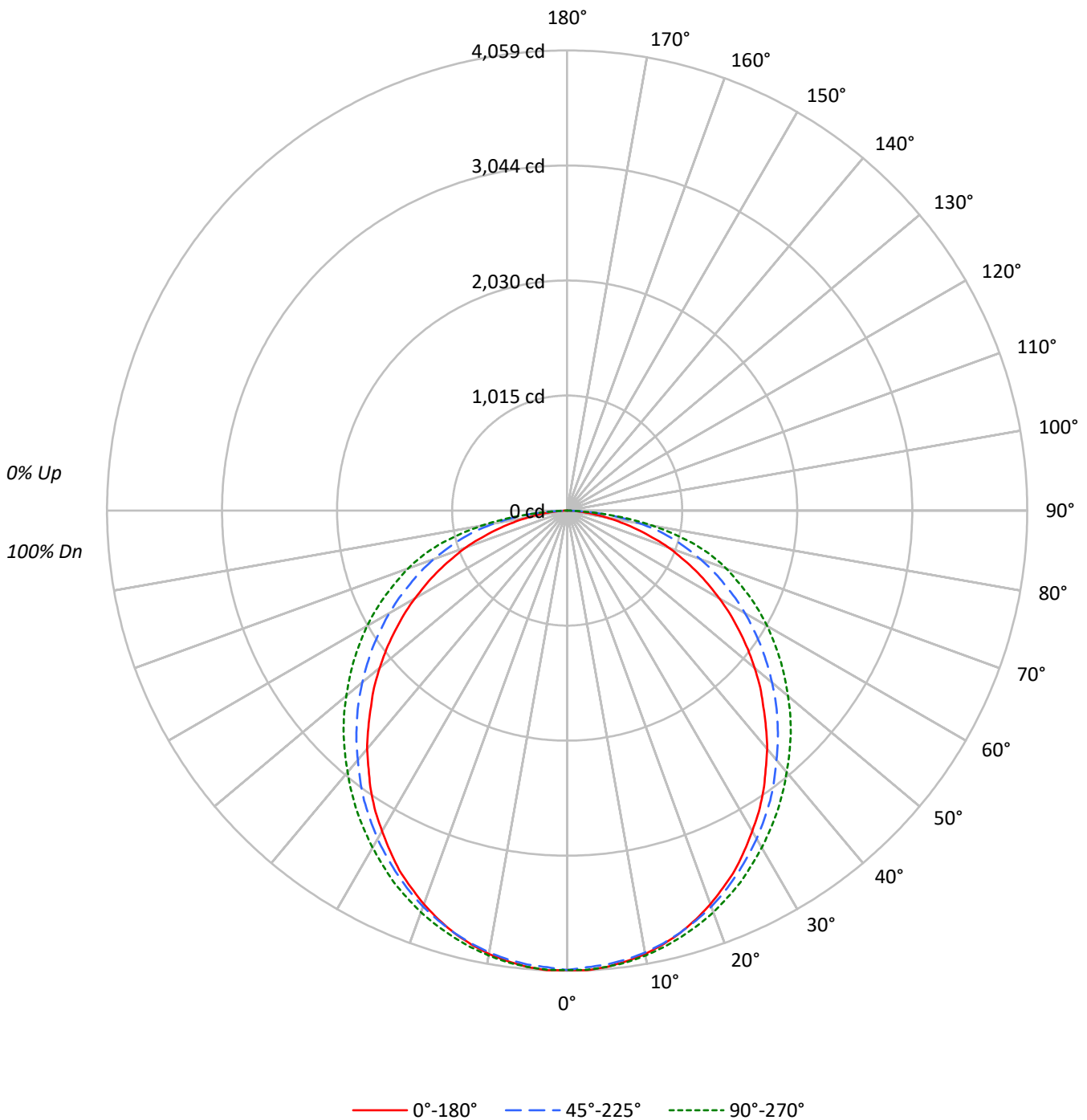
Input Watts (W): 80.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P473947

CATALOG NUMBER: 24CZ2-115VHE-UNV-L850-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P473947

CATALOG NUMBER: 24CZ2-115VHE-UNV-L850-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	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	89	82	76	95	88	81	75	84	78	74	81	76	72	78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52	63	57	51	61	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44	55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

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

	0°	45°	90°
0°	5453	5453	5453
5°	5456	5428	5456
10°	5426	5408	5444
15°	5371	5368	5421
20°	5290	5323	5399
25°	5198	5257	5373
30°	5072	5196	5334
35°	4958	5129	5313
40°	4822	5045	5292
45°	4658	4994	5307
50°	4518	4938	5323
55°	4351	4902	5383
60°	4171	4880	5481
65°	3975	4862	5622
70°	3742	4912	5881
75°	3290	5014	6117
80°	2745	5050	5902
85°	1961	4329	4387



TEST NUMBER: P473947

CATALOG NUMBER: 24CZ2-115VHE-UNV-L850-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	383.1	3.3
10°-20°	1091.3	9.3
20°-30°	1637.1	14.0
30°-40°	1954.6	16.7
40°-50°	2024.6	17.3
50°-60°	1863.9	15.9
60°-70°	1503.5	12.8
70°-80°	982.4	8.4
80°-90°	288.0	2.5
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°	3111.6	26.5
0°-40°	5066.2	43.2
0°-60°	8954.6	76.3
0°-90°	11728.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11728.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4053	4053	4053	4053	4053	
5°	4040	4036	4019	4042	4040	383
15°	3856	3856	3854	3892	3892	1086
25°	3502	3509	3541	3606	3619	1610
35°	3018	3045	3123	3208	3234	1886
45°	2448	2509	2624	2742	2789	1892
55°	1855	1935	2090	2243	2295	1660
65°	1249	1334	1527	1702	1766	1235
75°	633	752	964	1131	1177	675
85°	127	220	280	298	284	157
90°	0	0	0	0	0	



TEST NUMBER: P473947

CATALOG NUMBER: 24CZ2-115VHE-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4052.9	4052.9	4052.9	4052.9	4052.9
2.5°	4058.6	4052.9	4032.1	4056.7	4054.8
5°	4039.7	4035.9	4018.8	4041.6	4039.7
7.5°	4009.4	4007.5	3994.2	4018.8	4018.8
10°	3971.5	3967.7	3958.2	3986.6	3984.7
12.5°	3918.4	3916.5	3910.8	3944.9	3943.0
15°	3855.9	3855.9	3854.0	3891.9	3891.9
17.5°	3780.1	3782.0	3789.6	3833.1	3835.0
20°	3694.8	3702.4	3717.6	3766.8	3770.6
22.5°	3598.2	3613.3	3634.2	3689.1	3694.8
25°	3501.6	3509.1	3541.3	3605.8	3619.0
27.5°	3384.1	3403.0	3444.7	3511.0	3524.3
30°	3264.7	3291.2	3344.3	3412.5	3433.3
32.5°	3147.2	3170.0	3232.5	3310.2	3334.8
35°	3018.4	3044.9	3122.6	3207.9	3234.4
37.5°	2876.3	2918.0	2999.4	3098.0	3126.4
40°	2745.5	2783.4	2872.5	2982.4	3012.7
42.5°	2595.8	2643.2	2751.2	2863.0	2900.9
45°	2448.1	2508.7	2624.3	2741.7	2789.1
47.5°	2309.7	2359.0	2495.4	2628.1	2669.7
50°	2158.2	2215.0	2359.0	2499.2	2542.8
52.5°	2008.5	2076.7	2222.6	2370.4	2417.7
55°	1855.0	1934.6	2089.9	2243.4	2294.6
57.5°	1707.2	1786.8	1947.8	2110.8	2163.8
60°	1549.9	1635.2	1813.3	1970.6	2036.9
62.5°	1398.3	1483.6	1671.2	1841.7	1904.3
65°	1248.7	1333.9	1527.2	1701.5	1765.9
67.5°	1093.3	1186.1	1392.7	1561.3	1623.8
70°	951.2	1040.2	1248.7	1428.7	1495.0
72.5°	788.2	894.3	1106.6	1284.7	1347.2
75°	632.9	752.2	964.4	1131.2	1176.7
77.5°	488.9	608.2	820.4	945.5	973.9
80°	354.3	475.6	651.8	739.0	761.7
82.5°	229.3	354.3	471.8	530.5	538.1
85°	127.0	219.8	280.4	297.5	284.2
87.5°	45.5	83.4	81.5	66.3	53.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)