

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: P272113

Luminaire Tested: **24CZ2-65-UNV-L930-CD1-U**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P272113  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-15)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-65-UNV-L930-CD1-U  
Description: 2'x4' TROFFER LED MODULE,RIBBED LENS, 90CRI  
Light Source: (112) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5423.0 lumens  
Efficiency: N/A  
Efficacy: 86.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

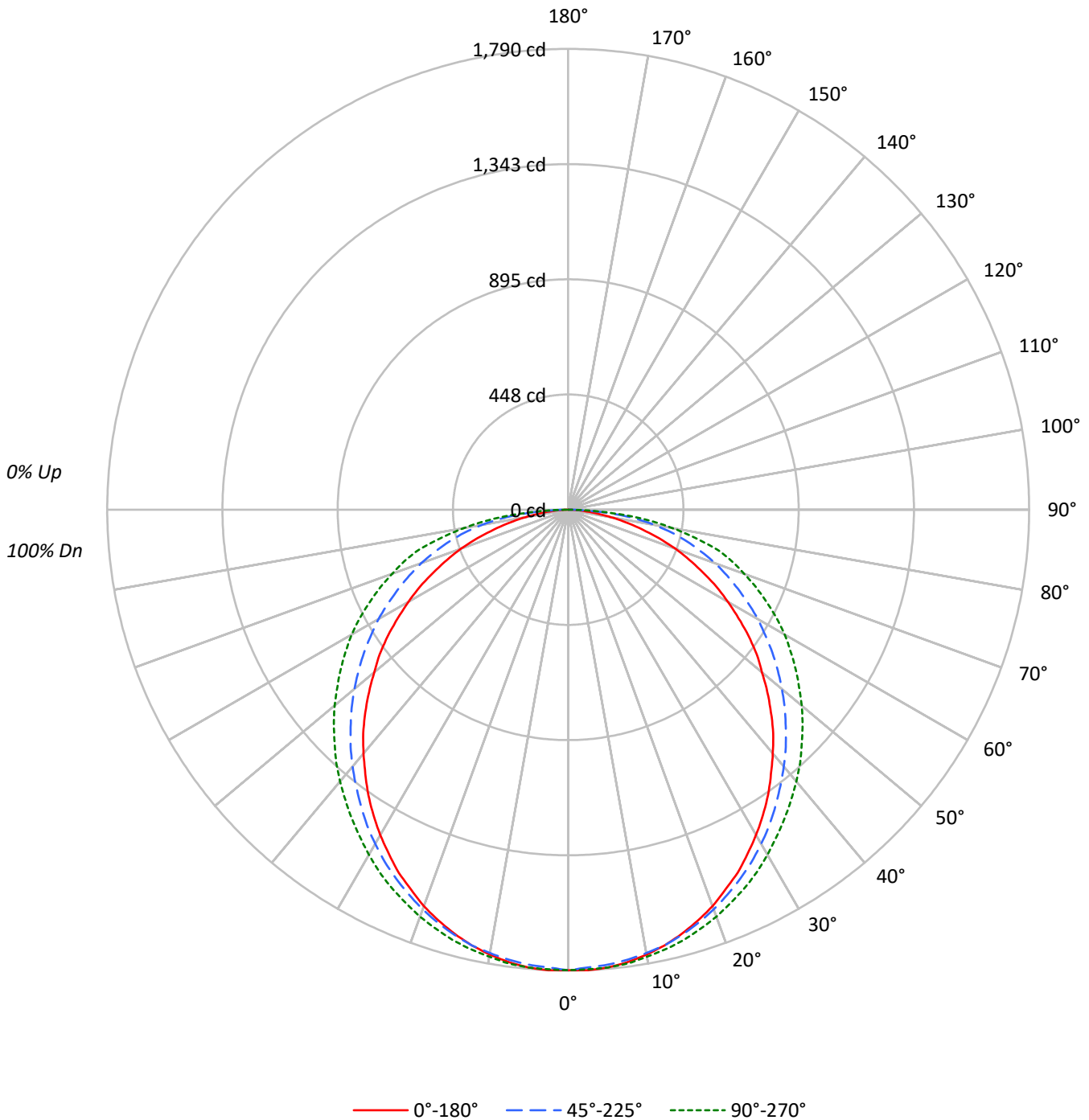
Input Watts (W): 62.8  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	108	103	98	94	105	100	96	92	96	92	89	92	89	87	88	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	79	67	58	52	64	57	51	62	56	50	60	54	50	47
5	74	61	52	45	72	60	51	44	58	50	44	56	49	43	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	64	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	37	31	57	45	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

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

	0°	45°	90°
0°	2406	2406	2406
5°	2411	2396	2411
10°	2397	2389	2409
15°	2376	2381	2411
20°	2347	2365	2409
25°	2311	2348	2407
30°	2267	2329	2404
35°	2222	2305	2406
40°	2171	2288	2421
45°	2119	2273	2441
50°	2056	2267	2478
55°	2005	2271	2528
60°	1927	2290	2615
65°	1839	2314	2709
70°	1741	2385	2860
75°	1553	2488	3124
80°	1324	2635	3192
85°	945	2611	3055



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.3	3.1
10°-20°	484.0	8.9
20°-30°	731.0	13.5
30°-40°	881.0	16.2
40°-50°	924.9	17.1
50°-60°	865.3	16.0
60°-70°	714.6	13.2
70°-80°	486.9	9.0
80°-90°	166.1	3.1
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°	1384.2	25.5
0°-40°	2265.2	41.8
0°-60°	4055.4	74.8
0°-90°	5423.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5423.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1788	1788	1788	1788	1788	
5°	1785	1783	1774	1785	1785	169
15°	1706	1708	1709	1727	1731	481
25°	1556	1564	1582	1612	1621	716
35°	1353	1367	1403	1450	1465	846
45°	1114	1137	1195	1260	1283	859
55°	855	889	968	1047	1078	763
65°	578	626	727	819	851	573
75°	299	367	479	569	601	318
85°	61	121	169	191	198	77
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1788.5	1788.5	1788.5	1788.5	1788.5
2.5°	1790.3	1788.5	1779.5	1788.5	1786.7
5°	1784.9	1783.1	1774.1	1784.9	1784.9
7.5°	1772.3	1772.3	1763.3	1775.9	1777.7
10°	1754.3	1754.3	1748.9	1763.3	1763.3
12.5°	1732.7	1732.7	1732.7	1747.1	1748.9
15°	1705.7	1707.5	1709.3	1727.3	1730.9
17.5°	1673.3	1676.9	1682.3	1703.9	1707.5
20°	1639.1	1642.7	1651.7	1676.9	1682.3
22.5°	1595.9	1604.9	1617.5	1646.3	1651.7
25°	1556.4	1563.6	1581.5	1612.1	1621.1
27.5°	1507.8	1518.6	1542.0	1574.3	1586.9
30°	1459.2	1470.0	1498.8	1536.6	1547.4
32.5°	1407.0	1423.2	1453.8	1493.4	1506.0
35°	1353.0	1367.4	1403.4	1450.2	1464.6
37.5°	1293.7	1313.5	1353.0	1403.4	1421.4
40°	1236.1	1257.7	1302.7	1356.6	1378.2
42.5°	1178.5	1200.1	1250.5	1311.7	1333.2
45°	1113.7	1137.1	1194.7	1259.5	1282.9
47.5°	1049.0	1077.8	1140.7	1209.1	1234.3
50°	982.4	1014.8	1083.2	1155.1	1183.9
52.5°	923.0	953.6	1025.6	1102.9	1129.9
55°	854.6	888.8	968.0	1047.2	1077.8
57.5°	784.5	822.3	906.8	993.2	1023.8
60°	716.1	757.5	851.0	937.4	971.6
62.5°	649.5	690.9	788.1	878.0	912.2
65°	577.6	626.1	726.9	818.7	851.0
67.5°	509.2	561.4	667.5	757.5	789.9
70°	442.6	493.0	606.3	694.5	726.9
72.5°	370.6	428.2	541.6	633.3	667.5
75°	298.7	367.0	478.6	568.6	601.0
77.5°	232.1	302.3	413.8	487.6	503.8
80°	170.9	242.9	340.1	392.2	412.0
82.5°	109.8	181.7	259.1	296.9	313.1
85°	61.2	120.6	169.1	190.7	197.9
87.5°	25.2	52.2	68.4	77.4	77.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)