

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: P272161

Luminaire Tested: **24CZ2-50-S-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: P272161  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-50-S-UNV-L930-CD1-U  
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS, 90CRI  
Light Source: (84) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

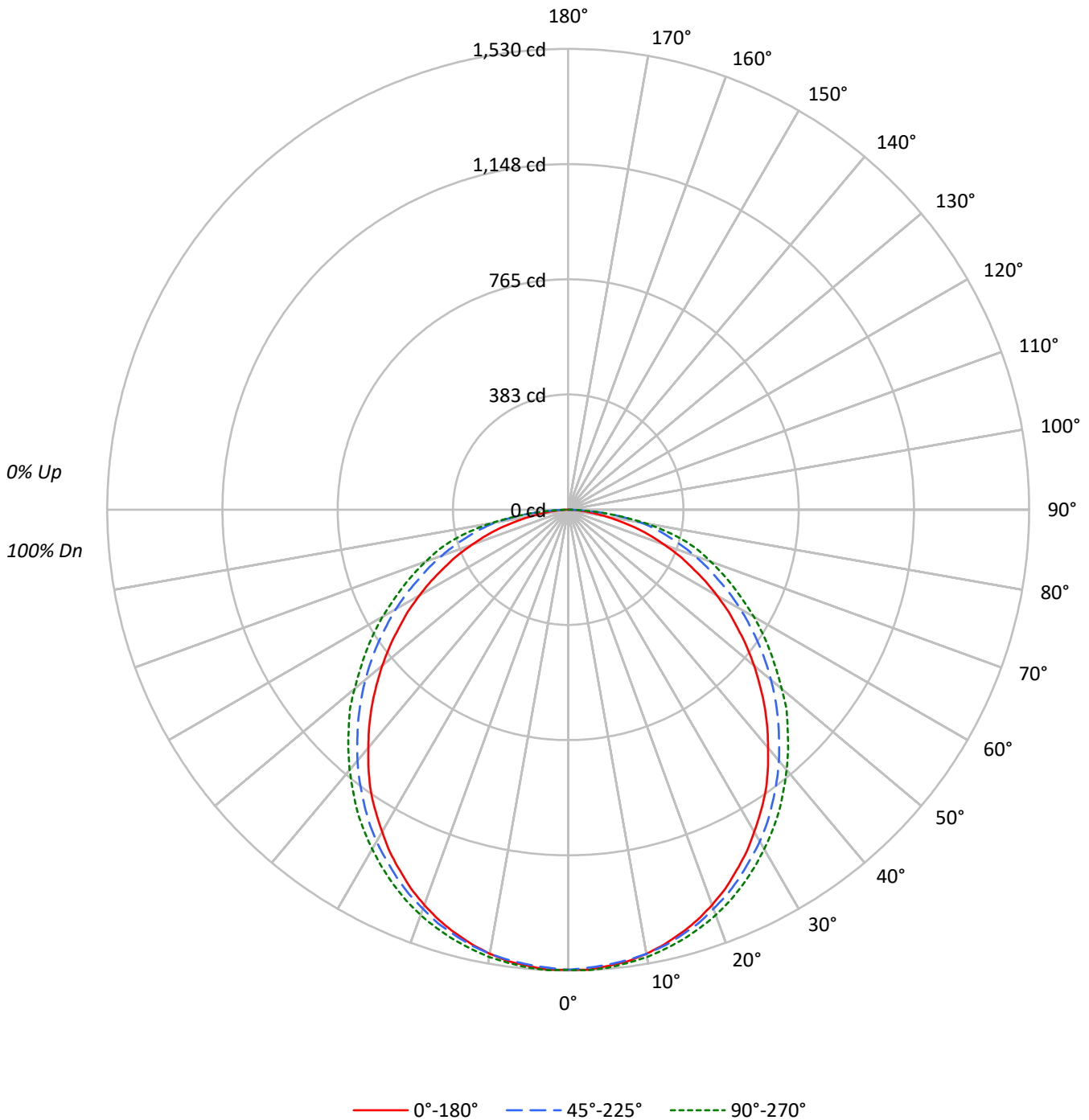
Lumens per Lamp: N/A  
Luminaire Lumens: 4348.0 lumens  
Efficiency: N/A  
Efficacy: 89.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 48.6  
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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	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°	2055	2055	2055
5°	2054	2048	2061
10°	2045	2045	2060
15°	2026	2035	2057
20°	1999	2019	2051
25°	1962	1999	2038
30°	1918	1976	2021
35°	1876	1944	2005
40°	1812	1912	1982
45°	1753	1874	1960
50°	1685	1839	1937
55°	1610	1805	1918
60°	1535	1777	1914
65°	1438	1746	1926
70°	1331	1755	1978
75°	1192	1788	2089
80°	963	1894	2044
85°	726	1663	1621



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	144.6	3.3
10°-20°	413.2	9.5
20°-30°	621.1	14.3
30°-40°	739.9	17.0
40°-50°	757.2	17.4
50°-60°	681.7	15.7
60°-70°	535.4	12.3
70°-80°	347.5	8.0
80°-90°	107.5	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°	1178.9	27.1
0°-40°	1918.8	44.1
0°-60°	3357.7	77.2
0°-90°	4348.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4348.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1528	1528	1528	1528	1528	
5°	1521	1523	1516	1525	1526	144
15°	1454	1458	1461	1474	1476	410
25°	1322	1333	1347	1369	1373	609
35°	1142	1156	1184	1213	1221	713
45°	921	943	985	1022	1030	710
55°	686	717	769	809	818	615
65°	452	486	548	594	605	450
75°	229	274	344	391	402	243
85°	47	87	108	105	105	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1527.5	1527.5	1527.5	1527.5	1527.5
2.5°	1528.9	1528.9	1522.0	1528.9	1530.2
5°	1520.6	1523.3	1516.4	1524.7	1526.1
7.5°	1512.3	1512.3	1508.1	1516.4	1517.8
10°	1497.1	1498.5	1497.1	1506.8	1508.1
12.5°	1477.8	1480.5	1481.9	1491.6	1493.0
15°	1454.3	1458.4	1461.2	1473.6	1476.4
17.5°	1428.0	1432.2	1439.1	1452.9	1455.7
20°	1396.3	1401.8	1410.1	1428.0	1432.2
22.5°	1361.8	1367.3	1381.1	1397.7	1404.6
25°	1321.7	1332.7	1346.6	1368.7	1372.8
27.5°	1281.6	1291.3	1309.3	1332.7	1338.3
30°	1234.7	1249.9	1272.0	1295.5	1301.0
32.5°	1189.1	1204.3	1230.5	1255.4	1262.3
35°	1142.2	1156.0	1183.6	1212.6	1220.9
37.5°	1088.3	1106.2	1136.6	1165.6	1173.9
40°	1031.7	1053.8	1088.3	1118.7	1128.3
42.5°	977.8	1001.3	1035.8	1069.0	1080.0
45°	921.2	943.3	984.7	1022.0	1030.3
47.5°	863.2	888.0	932.2	969.5	983.3
50°	805.2	831.4	878.4	917.0	925.3
52.5°	747.2	774.8	824.5	865.9	870.1
55°	686.4	716.8	769.3	809.3	817.6
57.5°	631.2	657.4	714.0	755.5	765.1
60°	570.4	599.4	660.2	698.8	711.3
62.5°	512.4	542.8	606.3	645.0	656.0
65°	451.6	486.1	548.3	593.9	604.9
67.5°	399.1	432.3	498.6	542.8	553.8
70°	338.4	375.7	446.1	491.7	502.7
72.5°	285.9	324.6	395.0	439.2	455.8
75°	229.3	273.5	343.9	390.8	401.9
77.5°	174.0	225.1	296.9	332.8	332.8
80°	124.3	178.2	244.5	261.0	263.8
82.5°	81.5	134.0	180.9	179.5	179.5
85°	47.0	87.0	107.7	105.0	105.0
87.5°	18.0	35.9	38.7	38.7	37.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)