

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: P272081

Luminaire Tested: **24CZ2-45-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: P272081  
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: 24CZ2-45-UNV-L930-CD1-U  
Description: 2'x4' TROFFER LED MODULE,RIBBED 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: 3810.0 lumens  
Efficiency: N/A  
Efficacy: 88.8 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

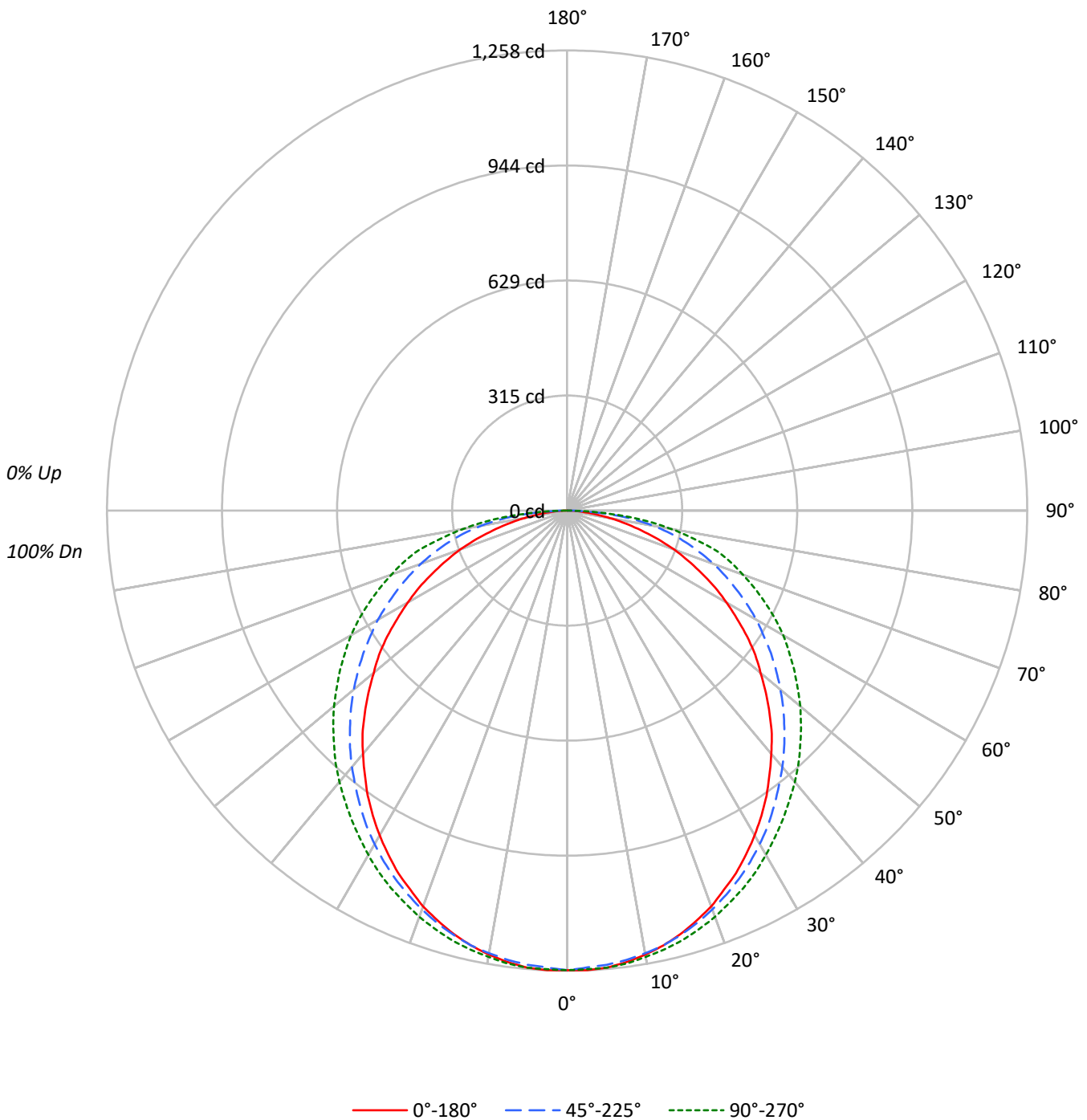
Input Watts (W): 42.9  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1691	1691	1691
5°	1694	1683	1694
10°	1684	1679	1693
15°	1669	1673	1694
20°	1649	1662	1692
25°	1623	1650	1691
30°	1593	1636	1689
35°	1561	1620	1690
40°	1525	1607	1701
45°	1489	1597	1715
50°	1445	1593	1741
55°	1408	1595	1776
60°	1354	1609	1837
65°	1292	1626	1904
70°	1223	1676	2009
75°	1091	1748	2195
80°	931	1851	2243
85°	664	1834	2146



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	118.9	3.1
10°-20°	340.0	8.9
20°-30°	513.6	13.5
30°-40°	619.0	16.2
40°-50°	649.8	17.1
50°-60°	607.9	16.0
60°-70°	502.0	13.2
70°-80°	342.1	9.0
80°-90°	116.7	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°	972.5	25.5
0°-40°	1591.5	41.8
0°-60°	2849.2	74.8
0°-90°	3810.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3810.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1256	1256	1256	1256	1256	
5°	1254	1253	1246	1254	1254	119
15°	1198	1200	1201	1214	1216	338
25°	1093	1098	1111	1133	1139	503
35°	951	961	986	1019	1029	594
45°	782	799	839	885	901	603
55°	600	624	680	736	757	536
65°	406	440	511	575	598	402
75°	210	258	336	400	422	224
85°	43	85	119	134	139	54
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1256.5	1256.5	1256.5	1256.5	1256.5
2.5°	1257.8	1256.5	1250.2	1256.5	1255.2
5°	1254.0	1252.7	1246.4	1254.0	1254.0
7.5°	1245.1	1245.1	1238.8	1247.7	1248.9
10°	1232.5	1232.5	1228.7	1238.8	1238.8
12.5°	1217.3	1217.3	1217.3	1227.4	1228.7
15°	1198.4	1199.6	1200.9	1213.5	1216.1
17.5°	1175.6	1178.1	1181.9	1197.1	1199.6
20°	1151.6	1154.1	1160.4	1178.1	1181.9
22.5°	1121.2	1127.6	1136.4	1156.6	1160.4
25°	1093.4	1098.5	1111.1	1132.6	1138.9
27.5°	1059.3	1066.9	1083.3	1106.1	1114.9
30°	1025.2	1032.8	1053.0	1079.5	1087.1
32.5°	988.5	999.9	1021.4	1049.2	1058.0
35°	950.6	960.7	986.0	1018.9	1029.0
37.5°	908.9	922.8	950.6	986.0	998.6
40°	868.4	883.6	915.2	953.1	968.3
42.5°	828.0	843.1	878.5	921.5	936.7
45°	782.5	798.9	839.4	884.9	901.3
47.5°	737.0	757.2	801.4	849.5	867.2
50°	690.2	712.9	761.0	811.5	831.8
52.5°	648.5	670.0	720.5	774.9	793.8
55°	600.4	624.5	680.1	735.7	757.2
57.5°	551.1	577.7	637.1	697.8	719.3
60°	503.1	532.2	597.9	658.6	682.6
62.5°	456.3	485.4	553.7	616.9	640.9
65°	405.8	439.9	510.7	575.2	597.9
67.5°	357.7	394.4	469.0	532.2	554.9
70°	311.0	346.4	426.0	487.9	510.7
72.5°	260.4	300.9	380.5	445.0	469.0
75°	209.8	257.9	336.2	399.5	422.2
77.5°	163.1	212.4	290.7	342.6	353.9
80°	120.1	170.7	238.9	275.6	289.5
82.5°	77.1	127.7	182.0	208.6	220.0
85°	43.0	84.7	118.8	134.0	139.0
87.5°	17.7	36.7	48.0	54.4	54.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)