

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: P272089

Luminaire Tested: **24CZ2-50-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: P272089  
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: 24CZ2-50-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: 4138.0 lumens  
Efficiency: N/A  
Efficacy: 85.1 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

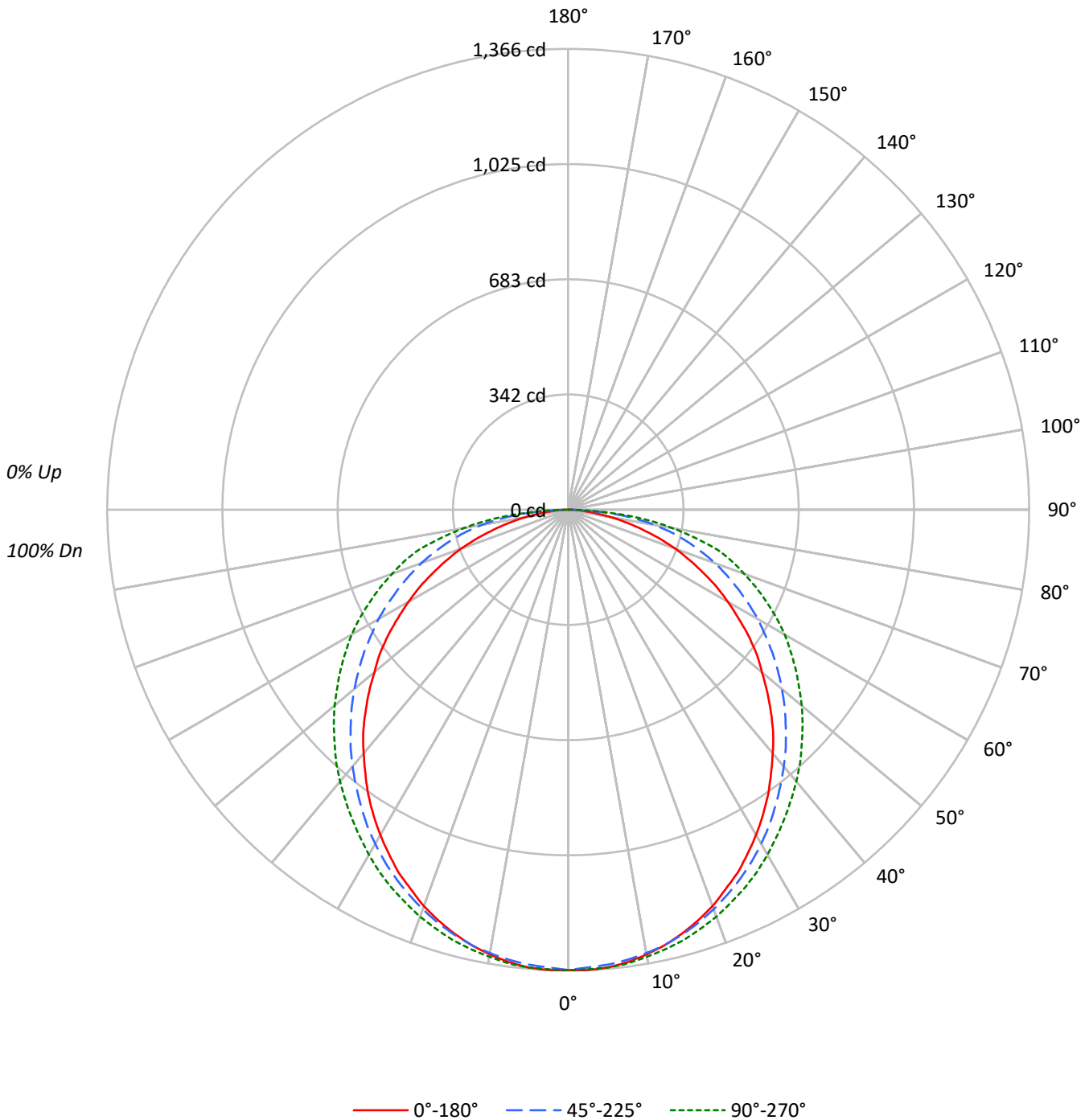
Input Watts (W): 48.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1836	1836	1836
5°	1839	1828	1839
10°	1829	1823	1838
15°	1813	1817	1840
20°	1791	1805	1838
25°	1763	1792	1836
30°	1730	1777	1834
35°	1696	1759	1836
40°	1657	1746	1847
45°	1617	1735	1863
50°	1569	1730	1891
55°	1530	1733	1929
60°	1470	1748	1995
65°	1403	1766	2067
70°	1328	1820	2182
75°	1185	1899	2384
80°	1010	2011	2436
85°	721	1993	2331



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.2	3.1
10°-20°	369.3	8.9
20°-30°	557.8	13.5
30°-40°	672.3	16.2
40°-50°	705.7	17.1
50°-60°	660.3	16.0
60°-70°	545.3	13.2
70°-80°	371.6	9.0
80°-90°	126.7	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°	1056.2	25.5
0°-40°	1728.5	41.8
0°-60°	3094.5	74.8
0°-90°	4138.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4138.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1365	1365	1365	1365	1365	
5°	1362	1361	1354	1362	1362	129
15°	1302	1303	1304	1318	1321	367
25°	1188	1193	1207	1230	1237	546
35°	1032	1043	1071	1107	1118	645
45°	850	868	912	961	979	655
55°	652	678	739	799	822	582
65°	441	478	555	625	649	437
75°	228	280	365	434	459	243
85°	47	92	129	146	151	58
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1364.7	1364.7	1364.7	1364.7	1364.7
2.5°	1366.0	1364.7	1357.8	1364.7	1363.3
5°	1361.9	1360.6	1353.7	1361.9	1361.9
7.5°	1352.3	1352.3	1345.5	1355.1	1356.4
10°	1338.6	1338.6	1334.5	1345.5	1345.5
12.5°	1322.1	1322.1	1322.1	1333.1	1334.5
15°	1301.5	1302.9	1304.3	1318.0	1320.7
17.5°	1276.8	1279.6	1283.7	1300.1	1302.9
20°	1250.7	1253.5	1260.3	1279.6	1283.7
22.5°	1217.8	1224.6	1234.2	1256.2	1260.3
25°	1187.6	1193.1	1206.8	1230.1	1237.0
27.5°	1150.5	1158.7	1176.6	1201.3	1210.9
30°	1113.4	1121.7	1143.6	1172.5	1180.7
32.5°	1073.6	1086.0	1109.3	1139.5	1149.1
35°	1032.4	1043.4	1070.9	1106.6	1117.6
37.5°	987.1	1002.2	1032.4	1070.9	1084.6
40°	943.2	959.7	994.0	1035.2	1051.7
42.5°	899.3	915.7	954.2	1000.9	1017.3
45°	849.8	867.7	911.6	961.0	978.9
47.5°	800.4	822.4	870.4	922.6	941.8
50°	749.6	774.3	826.5	881.4	903.4
52.5°	704.3	727.6	782.6	841.6	862.2
55°	652.1	678.2	738.6	799.0	822.4
57.5°	598.6	627.4	691.9	757.8	781.2
60°	546.4	578.0	649.4	715.3	741.4
62.5°	495.6	527.2	601.3	670.0	696.1
65°	440.7	477.8	554.7	624.7	649.4
67.5°	388.5	428.3	509.4	578.0	602.7
70°	337.7	376.2	462.7	529.9	554.7
72.5°	282.8	326.8	413.2	483.3	509.4
75°	227.9	280.1	365.2	433.8	458.6
77.5°	177.1	230.6	315.8	372.1	384.4
80°	130.4	185.3	259.5	299.3	314.4
82.5°	83.7	138.7	197.7	226.5	238.9
85°	46.7	92.0	129.1	145.5	151.0
87.5°	19.2	39.8	52.2	59.0	59.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)