

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: P272145

Luminaire Tested: **24CZ2-40-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: P272145  
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: 24CZ2-40-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**

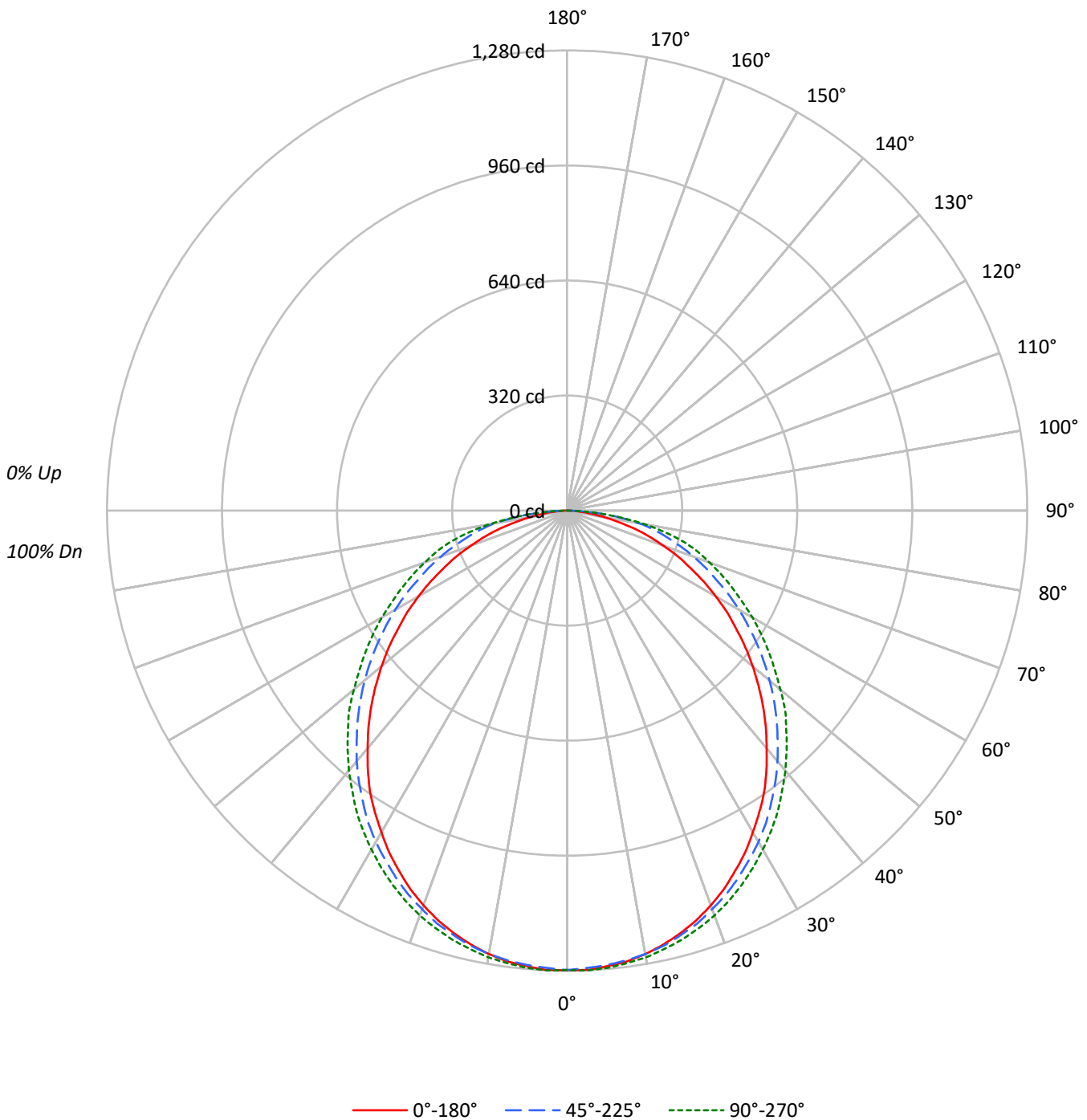
Lumens per Lamp: N/A  
Luminaire Lumens: 3638.0 lumens  
Efficiency: N/A  
Efficacy: 100.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 36.2  
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°	1720	1720	1720
5°	1718	1714	1725
10°	1711	1711	1724
15°	1695	1703	1721
20°	1673	1689	1716
25°	1642	1673	1705
30°	1605	1654	1691
35°	1570	1627	1678
40°	1516	1599	1658
45°	1467	1568	1640
50°	1410	1538	1621
55°	1347	1510	1605
60°	1284	1486	1601
65°	1203	1461	1611
70°	1114	1468	1655
75°	997	1496	1748
80°	806	1585	1710
85°	607	1391	1355



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.0	3.3
10°-20°	345.7	9.5
20°-30°	519.7	14.3
30°-40°	619.0	17.0
40°-50°	633.6	17.4
50°-60°	570.4	15.7
60°-70°	447.9	12.3
70°-80°	290.7	8.0
80°-90°	89.9	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°	986.4	27.1
0°-40°	1605.5	44.1
0°-60°	2809.4	77.2
0°-90°	3638.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3638.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1278	1278	1278	1278	1278	
5°	1272	1275	1269	1276	1277	121
15°	1217	1220	1223	1233	1235	343
25°	1106	1115	1127	1145	1149	509
35°	956	967	990	1015	1022	596
45°	771	789	824	855	862	594
55°	574	600	644	677	684	515
65°	378	407	459	497	506	376
75°	192	229	288	327	336	203
85°	39	73	90	88	88	47
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1278.1	1278.1	1278.1	1278.1	1278.1
2.5°	1279.2	1279.2	1273.4	1279.2	1280.4
5°	1272.3	1274.6	1268.8	1275.7	1276.9
7.5°	1265.3	1265.3	1261.9	1268.8	1270.0
10°	1252.6	1253.8	1252.6	1260.7	1261.9
12.5°	1236.5	1238.8	1239.9	1248.0	1249.2
15°	1216.8	1220.3	1222.6	1233.0	1235.3
17.5°	1194.9	1198.3	1204.1	1215.7	1218.0
20°	1168.3	1172.9	1179.8	1194.9	1198.3
22.5°	1139.4	1144.0	1155.6	1169.4	1175.2
25°	1105.9	1115.1	1126.7	1145.2	1148.6
27.5°	1072.4	1080.5	1095.5	1115.1	1119.7
30°	1033.1	1045.8	1064.3	1083.9	1088.5
32.5°	994.9	1007.7	1029.6	1050.4	1056.2
35°	955.7	967.2	990.3	1014.6	1021.5
37.5°	910.6	925.6	951.0	975.3	982.2
40°	863.2	881.7	910.6	936.0	944.1
42.5°	818.1	837.8	866.7	894.4	903.7
45°	770.8	789.2	823.9	855.1	862.1
47.5°	722.2	743.0	780.0	811.2	822.8
50°	673.7	695.6	734.9	767.3	774.2
52.5°	625.2	648.3	689.9	724.5	728.0
55°	574.3	599.7	643.6	677.2	684.1
57.5°	528.1	550.0	597.4	632.1	640.2
60°	477.2	501.5	552.4	584.7	595.1
62.5°	428.7	454.1	507.3	539.6	548.9
65°	377.9	406.8	458.8	496.9	506.1
67.5°	334.0	361.7	417.2	454.1	463.4
70°	283.1	314.3	373.2	411.4	420.6
72.5°	239.2	271.6	330.5	367.5	381.3
75°	191.8	228.8	287.7	327.0	336.3
77.5°	145.6	188.4	248.4	278.5	278.5
80°	104.0	149.1	204.5	218.4	220.7
82.5°	68.2	112.1	151.4	150.2	150.2
85°	39.3	72.8	90.1	87.8	87.8
87.5°	15.0	30.0	32.4	32.4	31.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)