

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: P474063

Luminaire Tested: **24CZ2-40-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474063  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-40-S-UNV-L840-CD1-U  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

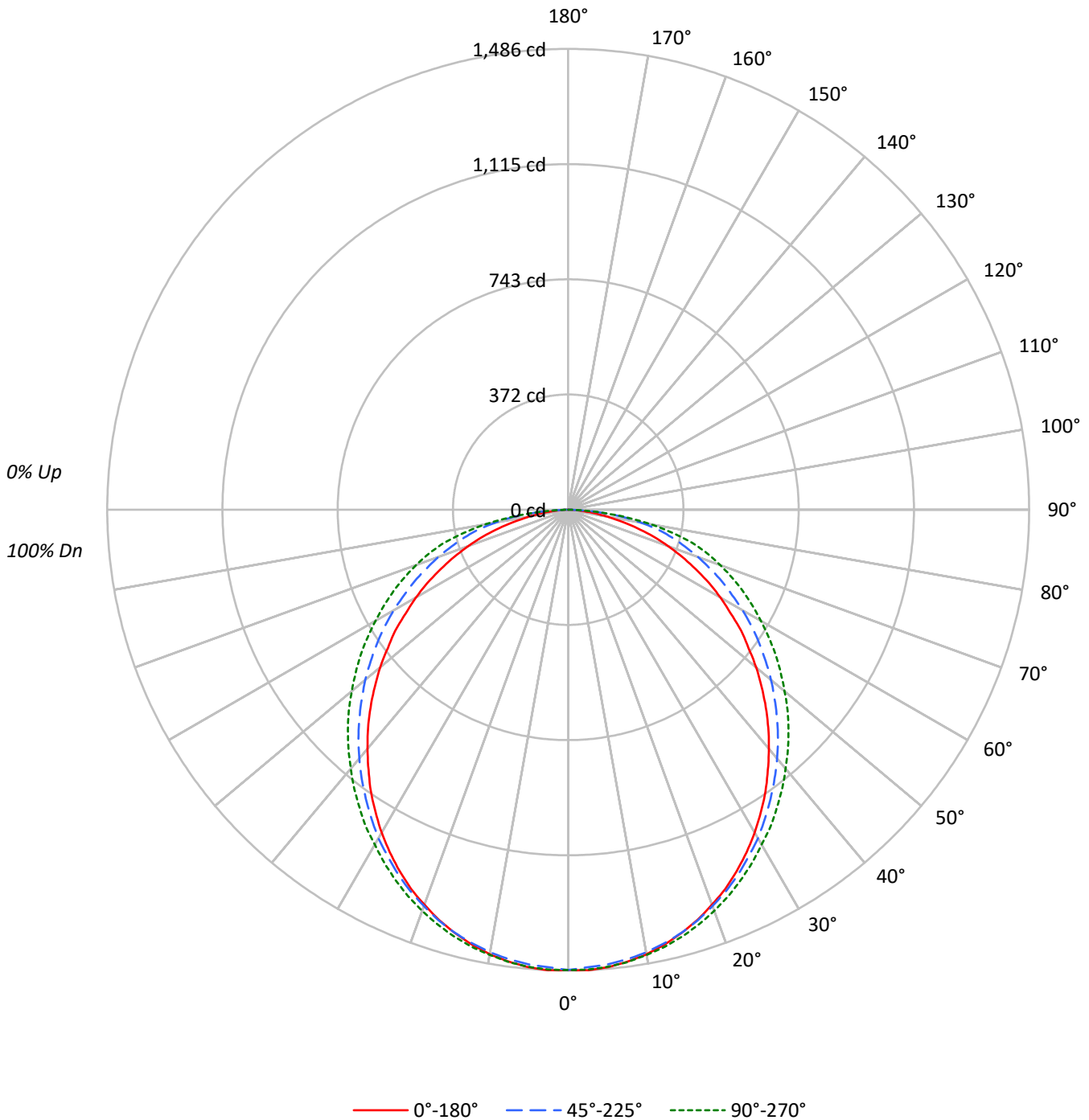
Lumens per Lamp: N/A  
Luminaire Lumens: 4252.1 lumens  
Efficiency: N/A  
Efficacy: 134.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 31.6  
Input Voltage (V): 120  
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	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	1997	1997	1997
5°	2000	1988	1998
10°	1989	1980	1991
15°	1968	1967	1984
20°	1941	1947	1971
25°	1909	1926	1956
30°	1869	1901	1937
35°	1822	1868	1926
40°	1768	1840	1915
45°	1714	1811	1911
50°	1656	1787	1906
55°	1597	1765	1917
60°	1524	1748	1930
65°	1443	1741	1977
70°	1346	1750	2047
75°	1198	1801	2157
80°	979	1840	2105
85°	690	1607	1639



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	140.3	3.3
10°-20°	399.6	9.4
20°-30°	599.0	14.1
30°-40°	713.5	16.8
40°-50°	735.7	17.3
50°-60°	671.3	15.8
60°-70°	536.8	12.6
70°-80°	350.6	8.2
80°-90°	105.3	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°	1139.0	26.8
0°-40°	1852.5	43.6
0°-60°	3259.5	76.7
0°-90°	4252.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4252.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1484	1484	1484	1484	1484	
5°	1481	1478	1472	1481	1479	140
15°	1413	1414	1412	1424	1424	398
25°	1286	1288	1297	1316	1317	592
35°	1109	1117	1137	1166	1173	693
45°	901	917	952	992	1004	695
55°	681	700	752	802	817	607
65°	453	484	547	601	621	449
75°	230	269	346	402	415	245
85°	45	80	104	106	106	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1484.2	1484.2	1484.2	1484.2	1484.2
2.5°	1486.3	1484.2	1476.5	1485.6	1484.2
5°	1480.7	1477.9	1471.6	1480.7	1479.3
7.5°	1469.5	1468.1	1461.8	1472.3	1470.9
10°	1455.5	1454.2	1449.3	1459.7	1457.6
12.5°	1436.0	1435.3	1431.8	1444.4	1443.0
15°	1412.9	1413.6	1412.2	1424.1	1424.1
17.5°	1386.4	1385.7	1388.5	1403.2	1401.8
20°	1355.7	1356.4	1359.9	1376.6	1376.6
22.5°	1323.5	1322.8	1330.5	1347.3	1348.7
25°	1285.8	1287.9	1297.0	1315.9	1317.3
27.5°	1245.3	1248.8	1260.0	1281.6	1283.7
30°	1202.7	1206.9	1223.7	1243.9	1246.7
32.5°	1155.9	1165.0	1180.4	1206.2	1213.2
35°	1109.1	1116.8	1137.1	1165.7	1172.7
37.5°	1057.4	1070.0	1093.1	1124.5	1133.6
40°	1006.5	1019.0	1047.7	1080.5	1090.3
42.5°	954.8	968.0	1000.9	1037.9	1048.4
45°	901.0	917.1	952.0	991.8	1004.4
47.5°	845.8	864.7	902.4	945.7	959.7
50°	791.3	810.2	853.5	898.2	910.8
52.5°	732.7	756.4	802.5	850.7	863.3
55°	681.0	700.5	752.2	801.8	817.2
57.5°	620.2	646.8	701.9	752.2	766.9
60°	566.4	590.9	649.5	700.5	717.3
62.5°	512.0	537.1	595.8	653.7	669.1
65°	453.3	484.0	546.9	600.7	620.9
67.5°	397.4	429.5	493.8	551.1	572.0
70°	342.2	375.1	444.9	503.6	520.3
72.5°	287.8	322.0	394.6	451.9	471.4
75°	230.5	268.9	346.4	402.3	414.9
77.5°	176.7	219.3	297.5	335.3	344.3
80°	126.4	173.2	237.5	264.7	271.7
82.5°	83.1	128.5	177.4	192.1	190.0
85°	44.7	80.3	104.1	106.2	106.2
87.5°	17.5	32.1	32.8	25.1	23.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)