

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: P474065

Luminaire Tested: **24CZ2-50-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474065  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-50-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**

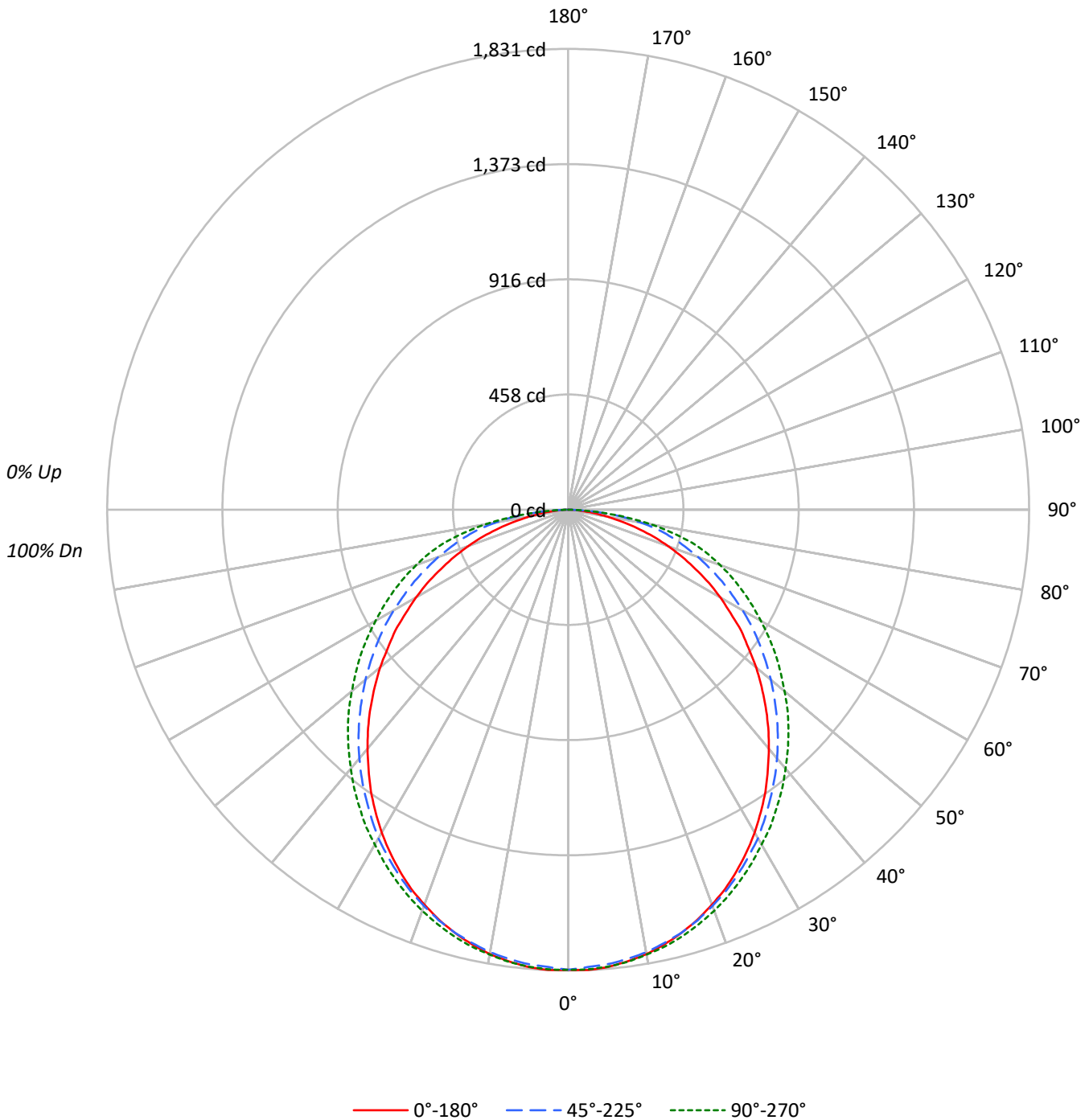
Lumens per Lamp: N/A  
Luminaire Lumens: 5237.5 lumens  
Efficiency: N/A  
Efficacy: 131.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 39.8  
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°	2460	2460	2460
5°	2463	2448	2461
10°	2449	2439	2453
15°	2424	2423	2443
20°	2391	2398	2428
25°	2351	2372	2409
30°	2302	2342	2386
35°	2244	2300	2372
40°	2177	2266	2359
45°	2112	2231	2354
50°	2040	2201	2348
55°	1968	2173	2361
60°	1877	2153	2377
65°	1777	2145	2435
70°	1658	2156	2521
75°	1476	2218	2656
80°	1206	2266	2593
85°	851	1979	2019



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	172.8	3.3
10°-20°	492.2	9.4
20°-30°	737.9	14.1
30°-40°	878.8	16.8
40°-50°	906.1	17.3
50°-60°	826.8	15.8
60°-70°	661.2	12.6
70°-80°	431.9	8.2
80°-90°	129.7	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°	1402.9	26.8
0°-40°	2281.8	43.6
0°-60°	4014.7	76.7
0°-90°	5237.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5237.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1828	1828	1828	1828	1828	
5°	1824	1820	1813	1824	1822	173
15°	1740	1741	1740	1754	1754	491
25°	1584	1586	1598	1621	1622	729
35°	1366	1376	1400	1436	1444	853
45°	1110	1130	1173	1222	1237	856
55°	839	863	926	988	1006	747
65°	558	596	674	740	765	554
75°	284	331	427	496	511	302
85°	55	99	128	131	131	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1828.1	1828.1	1828.1	1828.1	1828.1
2.5°	1830.7	1828.1	1818.6	1829.8	1828.1
5°	1823.8	1820.4	1812.6	1823.8	1822.1
7.5°	1810.0	1808.3	1800.6	1813.5	1811.8
10°	1792.8	1791.1	1785.1	1798.0	1795.4
12.5°	1768.8	1767.9	1763.6	1779.1	1777.4
15°	1740.4	1741.2	1739.5	1754.1	1754.1
17.5°	1707.7	1706.8	1710.3	1728.3	1726.6
20°	1669.8	1670.7	1675.0	1695.6	1695.6
22.5°	1630.2	1629.4	1638.8	1659.5	1661.2
25°	1583.8	1586.4	1597.6	1620.8	1622.5
27.5°	1533.9	1538.2	1552.0	1578.6	1581.2
30°	1481.4	1486.6	1507.2	1532.2	1535.6
32.5°	1423.8	1435.0	1453.9	1485.7	1494.3
35°	1366.1	1375.6	1400.5	1435.8	1444.4
37.5°	1302.5	1318.0	1346.4	1385.1	1396.2
40°	1239.7	1255.2	1290.4	1330.9	1342.9
42.5°	1176.0	1192.4	1232.8	1278.4	1291.3
45°	1109.8	1129.6	1172.6	1221.6	1237.1
47.5°	1041.8	1065.0	1111.5	1164.8	1182.0
50°	974.7	997.9	1051.3	1106.3	1121.8
52.5°	902.4	931.7	988.5	1047.8	1063.3
55°	838.8	862.9	926.5	987.6	1006.5
57.5°	763.9	796.6	864.6	926.5	944.6
60°	697.7	727.8	800.1	862.9	883.5
62.5°	630.6	661.6	733.8	805.2	824.2
65°	558.3	596.2	673.6	739.8	764.8
67.5°	489.5	529.1	608.2	678.8	704.6
70°	421.5	462.0	548.0	620.3	640.9
72.5°	354.4	396.6	486.1	556.6	580.7
75°	283.9	331.2	426.7	495.5	511.0
77.5°	217.7	270.1	366.5	412.9	424.1
80°	155.7	213.4	292.5	326.0	334.7
82.5°	102.4	158.3	218.5	236.6	234.0
85°	55.1	98.9	128.2	130.8	130.8
87.5°	21.5	39.6	40.4	31.0	29.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)