

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: P474015

Luminaire Tested: **24CZ2-50-S-UNV-L835-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474015  
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-L835-CD1-U  
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

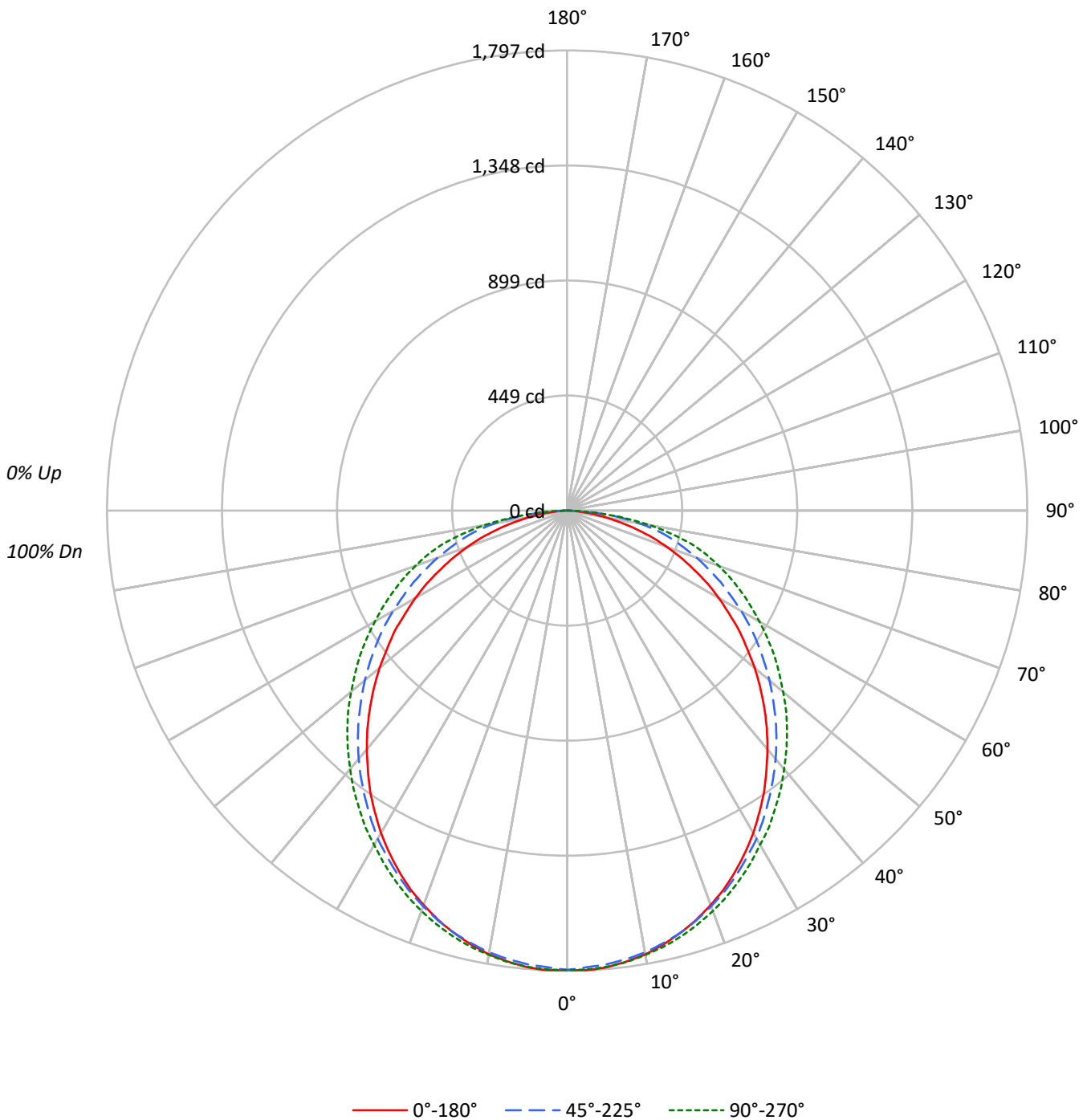
Lumens per Lamp: N/A  
Luminaire Lumens: 5139.8 lumens  
Efficiency: N/A  
Efficacy: 129.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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°	2414	2414	2414
5°	2417	2402	2415
10°	2404	2393	2407
15°	2379	2378	2398
20°	2346	2354	2383
25°	2307	2328	2364
30°	2259	2298	2341
35°	2202	2258	2328
40°	2137	2224	2315
45°	2072	2190	2310
50°	2002	2160	2304
55°	1931	2133	2317
60°	1843	2113	2333
65°	1744	2104	2389
70°	1627	2116	2474
75°	1448	2177	2607
80°	1184	2224	2545
85°	834	1942	1981



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	169.6	3.3
10°-20°	483.1	9.4
20°-30°	724.1	14.1
30°-40°	862.4	16.8
40°-50°	889.2	17.3
50°-60°	811.4	15.8
60°-70°	648.9	12.6
70°-80°	423.8	8.2
80°-90°	127.3	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°	1376.8	26.8
0°-40°	2239.2	43.6
0°-60°	3939.9	76.7
0°-90°	5139.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5139.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1794	1794	1794	1794	1794	
5°	1790	1786	1779	1790	1788	170
15°	1708	1709	1707	1721	1721	481
25°	1554	1557	1568	1591	1592	716
35°	1341	1350	1374	1409	1418	838
45°	1089	1108	1151	1199	1214	840
55°	823	847	909	969	988	733
65°	548	585	661	726	750	543
75°	279	325	419	486	502	296
85°	54	97	126	128	128	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1794.0	1794.0	1794.0	1794.0	1794.0
2.5°	1796.6	1794.0	1784.7	1795.7	1794.0
5°	1789.8	1786.4	1778.8	1789.8	1788.1
7.5°	1776.3	1774.6	1767.0	1779.7	1778.0
10°	1759.4	1757.7	1751.8	1764.5	1761.9
12.5°	1735.8	1734.9	1730.7	1745.9	1744.2
15°	1707.9	1708.8	1707.1	1721.4	1721.4
17.5°	1675.8	1675.0	1678.4	1696.1	1694.4
20°	1638.7	1639.5	1643.8	1664.0	1664.0
22.5°	1599.8	1599.0	1608.3	1628.6	1630.2
25°	1554.3	1556.8	1567.8	1590.6	1592.3
27.5°	1505.3	1509.5	1523.0	1549.2	1551.7
30°	1453.8	1458.9	1479.1	1503.6	1507.0
32.5°	1397.2	1408.2	1426.8	1458.0	1466.5
35°	1340.7	1350.0	1374.4	1409.0	1417.5
37.5°	1278.2	1293.4	1321.2	1359.2	1370.2
40°	1216.6	1231.8	1266.4	1306.1	1317.9
42.5°	1154.1	1170.1	1209.8	1254.6	1267.2
45°	1089.1	1108.5	1150.7	1198.8	1214.0
47.5°	1022.4	1045.2	1090.8	1143.1	1160.0
50°	956.5	979.3	1031.7	1085.7	1100.9
52.5°	885.6	914.3	970.0	1028.3	1043.5
55°	823.1	846.8	909.3	969.2	987.8
57.5°	749.7	781.8	848.5	909.3	927.0
60°	684.7	714.2	785.2	846.8	867.0
62.5°	618.8	649.2	720.1	790.2	808.8
65°	547.9	585.1	661.0	726.1	750.5
67.5°	480.4	519.2	596.9	666.1	691.4
70°	413.7	453.4	537.8	608.7	629.0
72.5°	347.8	389.2	477.0	546.2	569.9
75°	278.6	325.0	418.7	486.3	501.5
77.5°	213.6	265.1	359.6	405.2	416.2
80°	152.8	209.4	287.0	320.0	328.4
82.5°	100.5	155.3	214.4	232.2	229.6
85°	54.0	97.1	125.8	128.3	128.3
87.5°	21.1	38.8	39.7	30.4	28.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)