

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: P272160

Luminaire Tested: **24CZ2-50HE-S-UNV-L950-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: P272160  
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: 24CZ2-50HE-S-UNV-L950-CD1-U  
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS, 90CRI  
Light Source: (224) 5000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

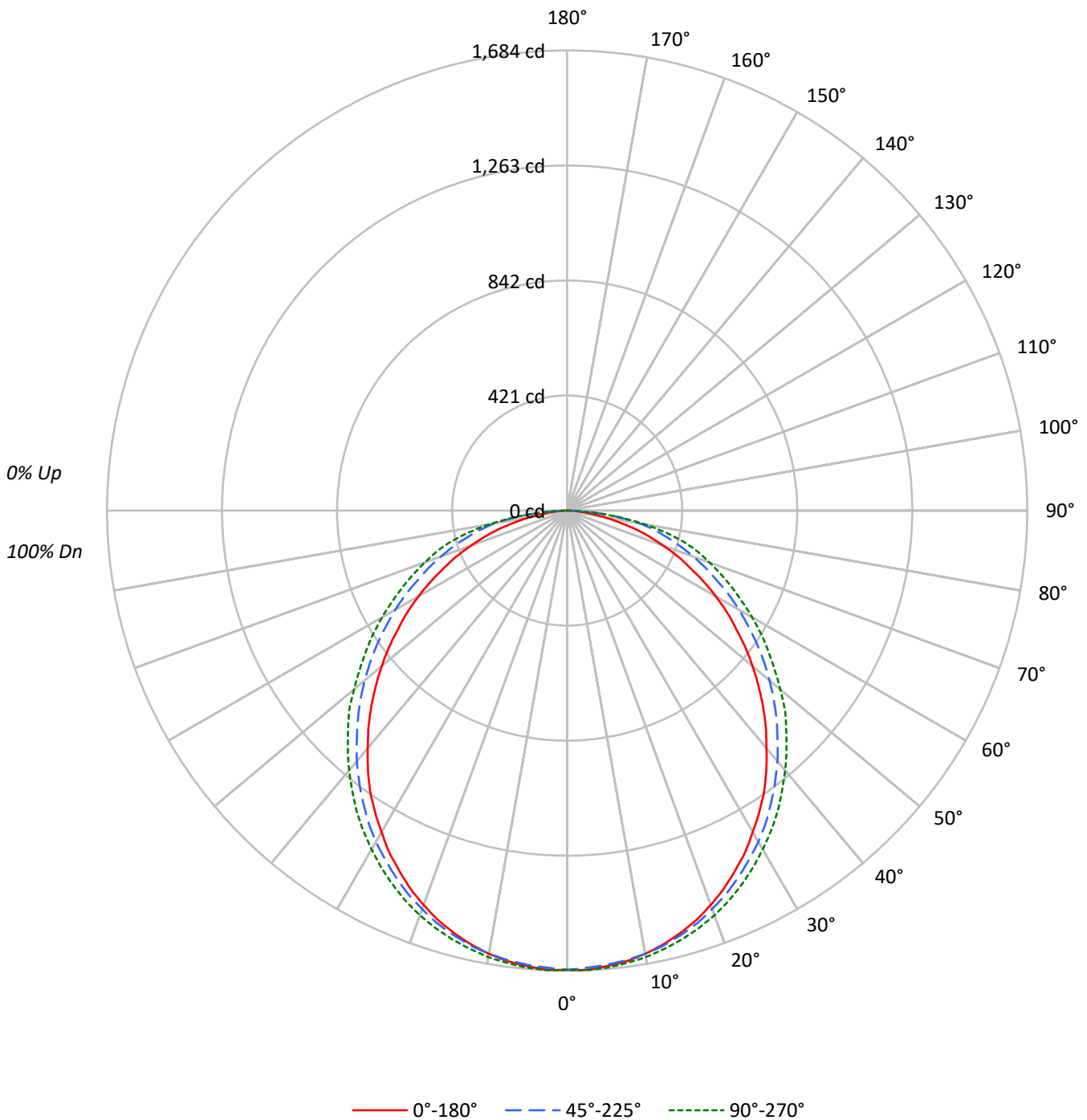
Lumens per Lamp: N/A  
Luminaire Lumens: 4784.0 lumens  
Efficiency: N/A  
Efficacy: 123.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 38.6  
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	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°	2261	2261	2261
5°	2260	2254	2268
10°	2250	2250	2267
15°	2229	2239	2263
20°	2200	2221	2256
25°	2159	2200	2242
30°	2111	2174	2224
35°	2064	2139	2206
40°	1994	2103	2181
45°	1929	2062	2157
50°	1854	2023	2131
55°	1772	1985	2110
60°	1689	1955	2106
65°	1582	1921	2119
70°	1465	1931	2176
75°	1311	1967	2299
80°	1060	2084	2249
85°	798	1829	1783



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.1	3.3
10°-20°	454.6	9.5
20°-30°	683.4	14.3
30°-40°	814.1	17.0
40°-50°	833.1	17.4
50°-60°	750.1	15.7
60°-70°	589.1	12.3
70°-80°	382.3	8.0
80°-90°	118.2	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°	1297.1	27.1
0°-40°	2111.2	44.1
0°-60°	3694.4	77.2
0°-90°	4784.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4784.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1681	1681	1681	1681	1681	
5°	1673	1676	1668	1678	1679	159
15°	1600	1605	1608	1621	1624	451
25°	1454	1466	1482	1506	1510	670
35°	1257	1272	1302	1334	1343	784
45°	1014	1038	1084	1124	1134	781
55°	755	789	846	890	900	677
65°	497	535	603	653	666	495
75°	252	301	378	430	442	267
85°	52	96	118	116	116	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1680.7	1680.7	1680.7	1680.7	1680.7
2.5°	1682.2	1682.2	1674.6	1682.2	1683.7
5°	1673.1	1676.1	1668.5	1677.6	1679.1
7.5°	1663.9	1663.9	1659.4	1668.5	1670.0
10°	1647.2	1648.7	1647.2	1657.9	1659.4
12.5°	1625.9	1629.0	1630.5	1641.1	1642.7
15°	1600.1	1604.7	1607.7	1621.4	1624.4
17.5°	1571.2	1575.8	1583.4	1598.6	1601.6
20°	1536.3	1542.4	1551.5	1571.2	1575.8
22.5°	1498.3	1504.4	1519.6	1537.8	1545.4
25°	1454.2	1466.4	1481.6	1505.9	1510.5
27.5°	1410.2	1420.8	1440.6	1466.4	1472.5
30°	1358.5	1375.2	1399.5	1425.4	1431.4
32.5°	1308.4	1325.1	1353.9	1381.3	1388.9
35°	1256.7	1271.9	1302.3	1334.2	1343.3
37.5°	1197.4	1217.2	1250.6	1282.5	1291.6
40°	1135.1	1159.4	1197.4	1230.9	1241.5
42.5°	1075.9	1101.7	1139.7	1176.2	1188.3
45°	1013.6	1037.9	1083.5	1124.5	1133.6
47.5°	949.7	977.1	1025.7	1066.7	1081.9
50°	885.9	914.8	966.4	1009.0	1018.1
52.5°	822.1	852.5	907.2	952.8	957.3
55°	755.2	788.7	846.4	890.5	899.6
57.5°	694.4	723.3	785.6	831.2	841.8
60°	627.6	659.5	726.4	768.9	782.6
62.5°	563.8	597.2	667.1	709.6	721.8
65°	496.9	534.9	603.3	653.4	665.6
67.5°	439.2	475.6	548.6	597.2	609.3
70°	372.3	413.3	490.8	541.0	553.1
72.5°	314.6	357.1	434.6	483.2	501.5
75°	252.2	300.9	378.4	430.0	442.2
77.5°	191.5	247.7	326.7	366.2	366.2
80°	136.8	196.0	269.0	287.2	290.2
82.5°	89.7	147.4	199.1	197.5	197.5
85°	51.7	95.7	118.5	115.5	115.5
87.5°	19.8	39.5	42.5	42.5	41.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)