

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: P474573

Luminaire Tested: **24CZ2-50HE-SQR-UNV-L830-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474573  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-50HE-SQR-UNV-L830-CD1-U  
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SQUARE LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4734.4 lumens  
Efficiency: N/A  
Efficacy: 122.7 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

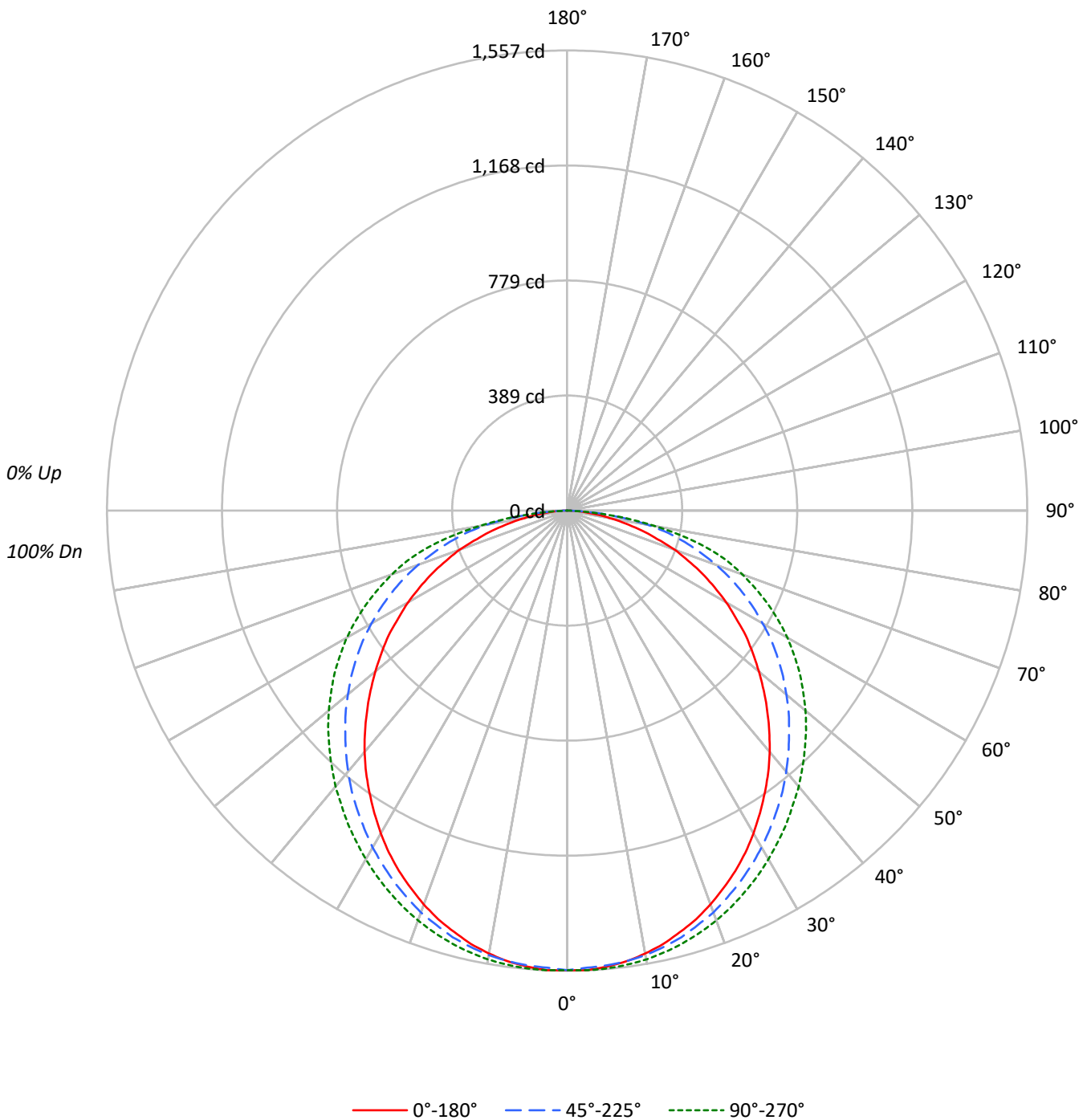
Input Watts (W): 38.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P474573

CATALOG NUMBER: 24CZ2-50HE-SQR-UNV-L830-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P474573

CATALOG NUMBER: 24CZ2-50HE-SQR-UNV-L830-CD1-U

**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	98	94	105	101	96	93	96	93	90		92	90	87		89	87	84	82
2	98	89	82	76	95	87	81	75	84	78	73		80	76	71		77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	59	56
4	81	69	59	53	79	67	59	52	65	57	51		62	56	51		60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39		50	43	38		49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34		46	39	34		44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30		42	35	30		41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27		39	32	27		38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25		36	29	25		35	29	24	23

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

	0°	45°	90°
0°	4185	4185	4185
5°	4184	4172	4201
10°	4158	4173	4214
15°	4113	4164	4221
20°	4061	4143	4226
25°	3995	4114	4227
30°	3918	4089	4233
35°	3829	4065	4249
40°	3746	4052	4283
45°	3644	4041	4329
50°	3546	4053	4408
55°	3463	4081	4507
60°	3346	4111	4632
65°	3212	4161	4773
70°	3047	4220	4963
75°	2729	4278	5128
80°	2297	4289	4654
85°	1704	3245	3060



TEST NUMBER: P474573

CATALOG NUMBER: 24CZ2-50HE-SQR-UNV-L830-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	147.4	3.1
10°-20°	422.3	8.9
20°-30°	639.4	13.5
30°-40°	773.4	16.3
40°-50°	816.4	17.2
50°-60°	769.9	16.3
60°-70°	634.7	13.4
70°-80°	416.4	8.8
80°-90°	114.5	2.4
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°	1209.1	25.5
0°-40°	1982.5	41.9
0°-60°	3568.8	75.4
0°-90°	4734.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4734.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1555	1555	1555	1555	1555	
5°	1549	1549	1544	1555	1555	147
15°	1476	1485	1495	1512	1515	417
25°	1346	1362	1386	1414	1424	620
35°	1166	1196	1237	1280	1293	730
45°	958	1001	1062	1119	1138	739
55°	738	790	870	935	961	658
65°	504	565	654	723	750	498
75°	262	330	412	476	493	277
85°	55	95	105	102	99	68
90°	0	0	0	0	0	



TEST NUMBER: P474573

CATALOG NUMBER: 24CZ2-50HE-SQR-UNV-L830-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1555.1	1555.1	1555.1	1555.1	1555.1
2.5°	1556.6	1555.1	1548.3	1557.4	1556.6
5°	1549.0	1549.0	1544.5	1555.1	1555.1
7.5°	1538.4	1539.2	1537.7	1549.8	1549.8
10°	1521.8	1524.8	1527.1	1540.7	1542.2
12.5°	1502.1	1507.4	1512.0	1528.6	1530.1
15°	1476.4	1484.7	1494.6	1512.0	1515.0
17.5°	1450.0	1459.8	1470.4	1493.1	1496.8
20°	1418.2	1429.5	1446.9	1469.6	1475.7
22.5°	1382.6	1398.5	1416.7	1443.9	1451.5
25°	1345.6	1362.2	1385.7	1414.4	1423.5
27.5°	1305.5	1325.2	1351.6	1384.9	1394.7
30°	1260.9	1283.6	1316.1	1351.6	1362.2
32.5°	1214.0	1240.4	1276.7	1316.1	1328.2
35°	1165.6	1195.8	1237.4	1279.8	1293.4
37.5°	1117.9	1148.2	1197.3	1242.0	1254.8
40°	1066.5	1099.8	1153.5	1201.1	1219.3
42.5°	1012.0	1051.3	1108.1	1161.0	1178.4
45°	957.6	1000.7	1061.9	1118.7	1137.6
47.5°	902.3	950.0	1017.3	1074.8	1096.7
50°	847.1	897.8	968.1	1030.2	1052.9
52.5°	791.2	844.1	920.5	986.3	1006.7
55°	738.2	790.4	869.8	934.9	960.6
57.5°	676.9	735.9	819.9	885.7	910.7
60°	621.7	679.2	763.9	833.5	860.7
62.5°	562.0	621.0	710.2	779.8	806.3
65°	504.5	565.0	653.5	723.1	749.6
67.5°	442.5	506.0	596.8	664.1	689.8
70°	387.3	447.0	536.3	605.1	630.8
72.5°	319.9	388.0	473.5	541.6	569.5
75°	262.5	329.8	411.5	476.5	493.2
77.5°	201.9	269.3	350.2	392.6	403.9
80°	148.2	211.8	276.8	299.5	300.3
82.5°	99.8	155.8	192.9	204.2	202.7
85°	55.2	95.3	105.1	102.1	99.1
87.5°	22.7	31.8	25.7	18.2	14.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)