

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: P474665

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474665
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-50-SQR-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

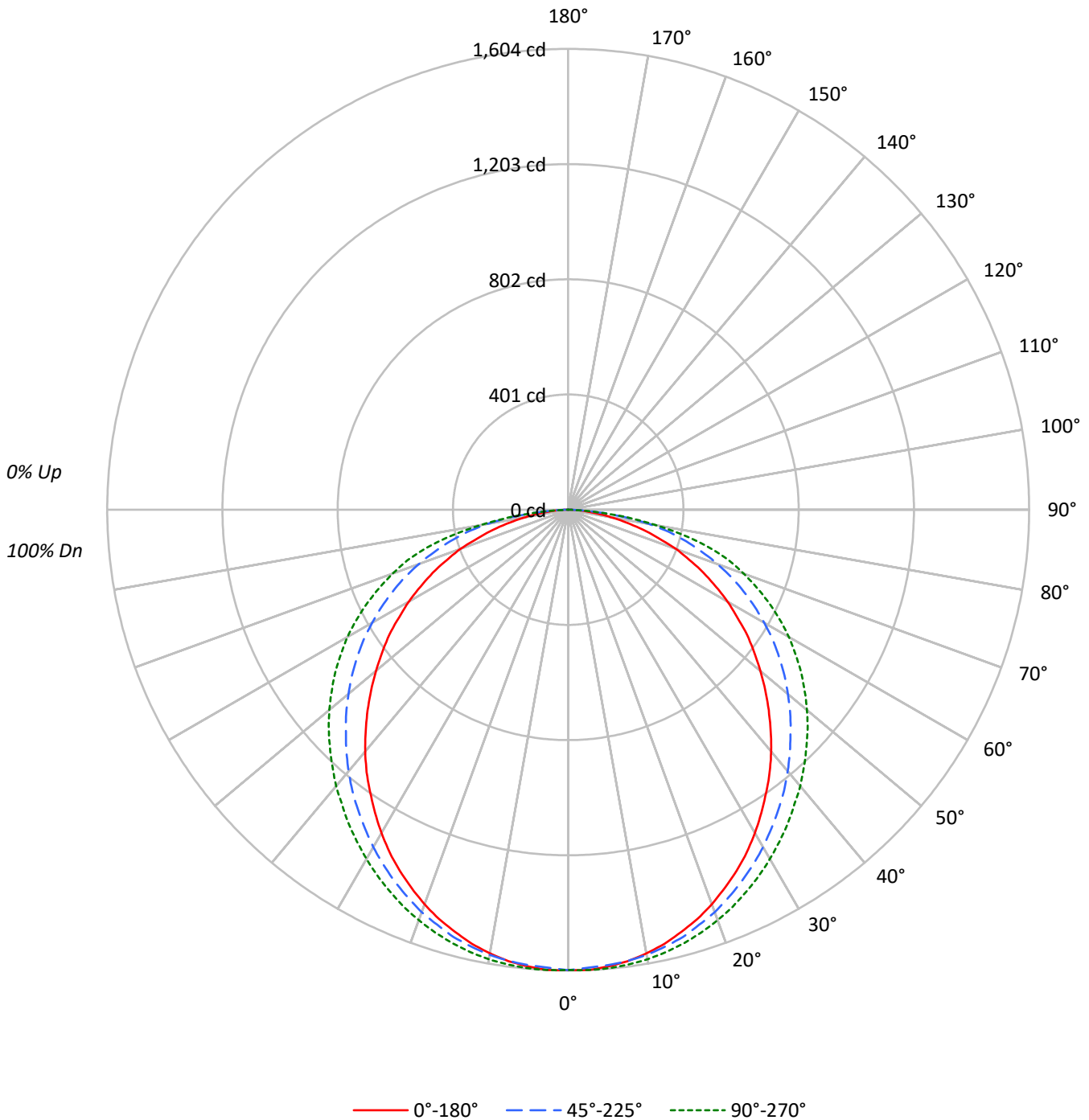
Lumens per Lamp: N/A
Luminaire Lumens: 4878.3 lumens
Efficiency: N/A
Efficacy: 122.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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



TEST NUMBER: P474665
CATALOG NUMBER: 24CZ2-50-SQR-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474665

CATALOG NUMBER: 24CZ2-50-SQR-UNV-L840-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°	4312	4312	4312
5°	4311	4299	4328
10°	4285	4300	4342
15°	4238	4290	4349
20°	4185	4269	4354
25°	4117	4239	4355
30°	4037	4214	4361
35°	3945	4188	4378
40°	3860	4175	4413
45°	3755	4164	4461
50°	3654	4176	4542
55°	3569	4205	4644
60°	3448	4237	4773
65°	3310	4288	4918
70°	3139	4348	5114
75°	2811	4408	5283
80°	2368	4420	4795
85°	1757	3344	3152



TEST NUMBER: P474665

CATALOG NUMBER: 24CZ2-50-SQR-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	151.9	3.1
10°-20°	435.2	8.9
20°-30°	658.8	13.5
30°-40°	796.9	16.3
40°-50°	841.2	17.2
50°-60°	793.3	16.3
60°-70°	654.0	13.4
70°-80°	429.0	8.8
80°-90°	118.0	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°	1245.8	25.5
0°-40°	2042.8	41.9
0°-60°	3677.3	75.4
0°-90°	4878.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4878.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1602	1602	1602	1602	1602	
5°	1596	1596	1591	1602	1602	151
15°	1521	1530	1540	1558	1561	429
25°	1386	1404	1428	1457	1467	639
35°	1201	1232	1275	1319	1333	752
45°	987	1031	1094	1153	1172	761
55°	761	814	896	963	990	678
65°	520	582	673	745	772	513
75°	270	340	424	491	508	286
85°	57	98	108	105	102	71
90°	0	0	0	0	0	



TEST NUMBER: P474665

CATALOG NUMBER: 24CZ2-50-SQR-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1602.4	1602.4	1602.4	1602.4	1602.4
2.5°	1603.9	1602.4	1595.3	1604.7	1603.9
5°	1596.1	1596.1	1591.4	1602.4	1602.4
7.5°	1585.2	1586.0	1584.4	1596.9	1596.9
10°	1568.1	1571.2	1573.5	1587.6	1589.1
12.5°	1547.8	1553.3	1557.9	1575.1	1576.6
15°	1521.3	1529.9	1540.0	1557.9	1561.1
17.5°	1494.0	1504.2	1515.1	1538.5	1542.4
20°	1461.3	1473.0	1490.9	1514.3	1520.5
22.5°	1424.7	1441.0	1459.7	1487.8	1495.6
25°	1386.5	1403.6	1427.8	1457.4	1466.8
27.5°	1345.2	1365.4	1392.7	1427.0	1437.1
30°	1299.2	1322.6	1356.1	1392.7	1403.6
32.5°	1250.9	1278.1	1315.6	1356.1	1368.6
35°	1201.0	1232.2	1275.0	1318.7	1332.7
37.5°	1151.9	1183.1	1233.7	1279.7	1293.0
40°	1098.9	1133.2	1188.5	1237.6	1256.3
42.5°	1042.8	1083.3	1141.8	1196.3	1214.2
45°	986.7	1031.1	1094.2	1152.7	1172.2
47.5°	929.8	978.9	1048.2	1107.5	1130.1
50°	872.9	925.1	997.6	1061.5	1084.9
52.5°	815.2	869.8	948.5	1016.3	1037.3
55°	760.7	814.4	896.3	963.3	989.8
57.5°	697.5	758.3	844.8	912.6	938.3
60°	640.6	699.9	787.2	858.9	886.9
62.5°	579.1	639.9	731.8	803.5	830.8
65°	519.8	582.2	673.4	745.1	772.3
67.5°	455.9	521.4	614.9	684.3	710.8
70°	399.0	460.6	552.6	623.5	650.0
72.5°	329.7	399.8	487.9	558.0	586.9
75°	270.4	339.8	424.0	491.0	508.1
77.5°	208.1	277.5	360.8	404.5	416.2
80°	152.8	218.2	285.2	308.6	309.4
82.5°	102.9	160.5	198.7	210.4	208.9
85°	56.9	98.2	108.3	105.2	102.1
87.5°	23.4	32.7	26.5	18.7	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)