

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: P474565

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

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474565  
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-L830-CD1-U  
Description: 2'X4' TROFFER LED MODULE, SQUARE LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

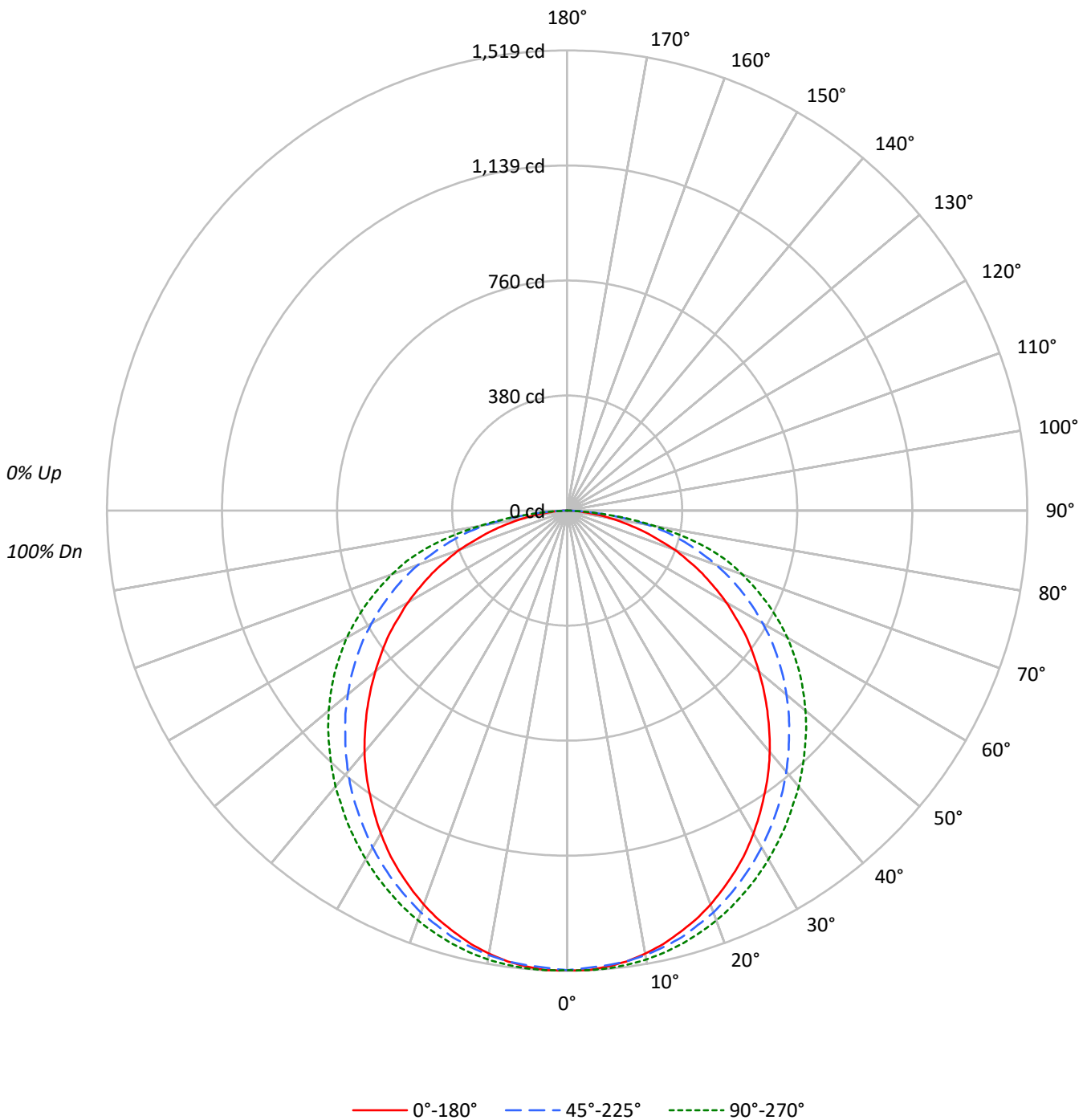
Lumens per Lamp: N/A  
Luminaire Lumens: 4619.8 lumens  
Efficiency: N/A  
Efficacy: 116.1 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

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



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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	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°	4083	4083	4083
5°	4083	4071	4099
10°	4058	4072	4112
15°	4014	4063	4118
20°	3963	4043	4124
25°	3899	4015	4124
30°	3823	3990	4130
35°	3736	3967	4146
40°	3656	3954	4179
45°	3556	3943	4224
50°	3460	3955	4301
55°	3379	3982	4397
60°	3265	4012	4520
65°	3135	4060	4657
70°	2973	4117	4843
75°	2663	4174	5003
80°	2242	4186	4541
85°	1664	3168	2986



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	143.8	3.1
10°-20°	412.1	8.9
20°-30°	623.9	13.5
30°-40°	754.7	16.3
40°-50°	796.6	17.2
50°-60°	751.2	16.3
60°-70°	619.3	13.4
70°-80°	406.3	8.8
80°-90°	111.7	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°	1179.8	25.5
0°-40°	1934.5	41.9
0°-60°	3482.4	75.4
0°-90°	4619.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4619.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1517	1517	1517	1517	1517	
5°	1512	1512	1507	1517	1517	143
15°	1441	1449	1458	1475	1478	406
25°	1313	1329	1352	1380	1389	605
35°	1137	1167	1208	1249	1262	712
45°	934	976	1036	1092	1110	721
55°	720	771	849	912	937	642
65°	492	551	638	706	731	486
75°	256	322	402	465	481	271
85°	54	93	103	100	97	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1517.4	1517.4	1517.4	1517.4	1517.4
2.5°	1518.9	1517.4	1510.8	1519.7	1518.9
5°	1511.5	1511.5	1507.1	1517.4	1517.4
7.5°	1501.2	1501.9	1500.5	1512.3	1512.3
10°	1485.0	1487.9	1490.1	1503.4	1504.9
12.5°	1465.8	1470.9	1475.4	1491.6	1493.1
15°	1440.7	1448.8	1458.4	1475.4	1478.3
17.5°	1414.9	1424.5	1434.8	1456.9	1460.6
20°	1383.9	1394.9	1411.9	1434.0	1440.0
22.5°	1349.2	1364.7	1382.4	1409.0	1416.3
25°	1313.0	1329.2	1352.1	1380.2	1389.0
27.5°	1273.9	1293.1	1318.9	1351.4	1361.0
30°	1230.3	1252.5	1284.2	1318.9	1329.2
32.5°	1184.6	1210.4	1245.8	1284.2	1296.0
35°	1137.3	1166.9	1207.5	1248.8	1262.1
37.5°	1090.8	1120.4	1168.3	1211.9	1224.4
40°	1040.7	1073.1	1125.5	1172.0	1189.7
42.5°	987.5	1025.9	1081.3	1132.9	1149.9
45°	934.4	976.5	1036.2	1091.6	1110.0
47.5°	880.5	927.0	992.7	1048.8	1070.2
50°	826.6	876.1	944.7	1005.2	1027.4
52.5°	772.0	823.7	898.2	962.4	982.4
55°	720.3	771.3	848.8	912.2	937.3
57.5°	660.6	718.1	800.1	864.3	888.6
60°	606.7	662.8	745.4	813.3	839.9
62.5°	548.4	605.9	693.0	760.9	786.8
65°	492.3	551.3	637.7	705.6	731.4
67.5°	431.8	493.8	582.3	648.0	673.1
70°	377.9	436.2	523.3	590.4	615.5
72.5°	312.2	378.6	462.0	528.4	555.8
75°	256.1	321.8	401.5	465.0	481.2
77.5°	197.1	262.7	341.7	383.1	394.1
80°	144.7	206.7	270.1	292.3	293.0
82.5°	97.4	152.0	188.2	199.3	197.8
85°	53.9	93.0	102.6	99.6	96.7
87.5°	22.1	31.0	25.1	17.7	14.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)