

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: P475228

Luminaire Tested: **22CZ2-39-SQR-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475228  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-39-SQR-UNV-L830-CD1-U  
Description: 2'X2' TROFFER LED MODULE, SQUARE LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

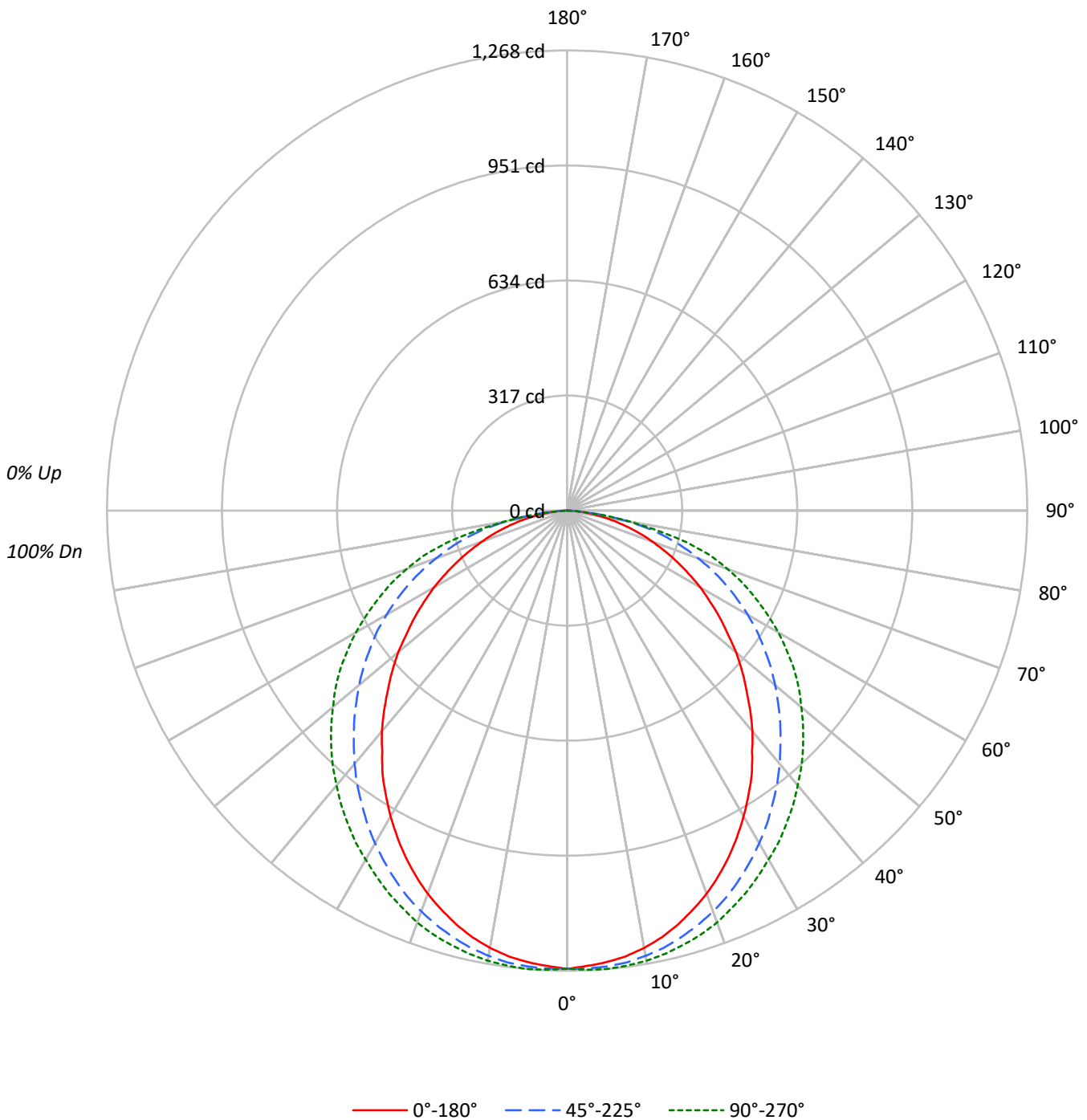
Lumens per Lamp: N/A  
Luminaire Lumens: 3614.9 lumens  
Efficiency: N/A  
Efficacy: 123.4 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 29.3  
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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	70	56	47	41	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°	3398	3398	3398
5°	3374	3406	3425
10°	3343	3404	3441
15°	3289	3389	3451
20°	3218	3366	3459
25°	3128	3331	3454
30°	3023	3289	3449
35°	2914	3241	3461
40°	2790	3201	3472
45°	2657	3160	3500
50°	2542	3131	3527
55°	2407	3107	3582
60°	2280	3094	3620
65°	2130	3069	3649
70°	1957	3024	3699
75°	1766	2943	3567
80°	1516	2607	2686
85°	1220	1535	1220



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.7	3.3
10°-20°	342.3	9.5
20°-30°	514.1	14.2
30°-40°	613.1	17.0
40°-50°	633.9	17.5
50°-60°	582.8	16.1
60°-70°	464.0	12.8
70°-80°	283.5	7.8
80°-90°	61.6	1.7
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°	976.1	27.0
0°-40°	1589.2	44.0
0°-60°	2805.9	77.6
0°-90°	3614.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3614.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1263	1263	1263	1263	1263	
5°	1249	1252	1261	1266	1268	118
15°	1180	1194	1216	1234	1239	332
25°	1054	1079	1122	1153	1163	485
35°	887	925	986	1038	1054	553
45°	698	748	830	897	920	540
55°	513	570	662	738	764	459
65°	334	391	482	549	573	331
75°	170	220	283	333	343	181
85°	40	48	50	43	40	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1262.7	1262.7	1262.7	1262.7	1262.7
2.5°	1255.9	1257.6	1262.7	1266.3	1266.3
5°	1249.0	1252.4	1261.0	1266.3	1268.0
7.5°	1238.8	1243.9	1255.9	1262.7	1264.6
10°	1223.4	1230.2	1245.6	1255.9	1259.3
12.5°	1204.4	1214.7	1233.6	1247.3	1250.7
15°	1180.5	1194.2	1216.4	1233.6	1238.8
17.5°	1153.0	1170.0	1197.6	1218.3	1225.1
20°	1123.7	1141.0	1175.4	1199.3	1207.8
22.5°	1089.5	1111.8	1151.3	1178.8	1185.6
25°	1053.5	1079.1	1122.0	1153.0	1163.2
27.5°	1014.0	1044.9	1091.3	1129.0	1137.6
30°	972.8	1005.4	1058.6	1099.8	1110.1
32.5°	929.9	967.7	1024.2	1070.6	1084.4
35°	887.0	924.8	986.5	1038.1	1053.5
37.5°	837.2	881.9	950.6	1003.7	1022.5
40°	794.3	837.2	911.1	969.4	988.4
42.5°	746.3	792.6	869.9	933.3	955.7
45°	698.3	748.0	830.4	897.4	919.6
47.5°	653.7	703.4	789.2	859.6	881.9
50°	607.3	658.8	748.0	820.2	842.4
52.5°	557.6	614.2	706.8	779.0	804.8
55°	513.0	569.6	662.2	737.8	763.6
57.5°	466.7	524.9	621.2	693.1	717.3
60°	423.7	480.3	574.9	645.1	672.6
62.5°	377.4	435.7	528.4	597.1	622.9
65°	334.5	391.3	482.0	549.0	573.0
67.5°	291.6	348.4	434.0	497.6	524.9
70°	248.7	305.5	384.3	446.1	470.1
72.5°	211.1	260.9	336.2	393.0	415.2
75°	169.9	219.7	283.1	332.8	343.1
77.5°	132.1	176.8	229.9	252.1	255.7
80°	97.8	132.1	168.2	173.3	173.3
82.5°	65.1	90.9	104.6	106.3	104.6
85°	39.5	48.0	49.7	42.9	39.5
87.5°	13.7	13.7	8.5	5.1	1.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)