

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: P475297

Luminaire Tested: **22CZ2-39VHE-SQR-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475297  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-39VHE-SQR-UNV-L840-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3794.9 lumens  
Efficiency: N/A  
Efficacy: 142.1 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

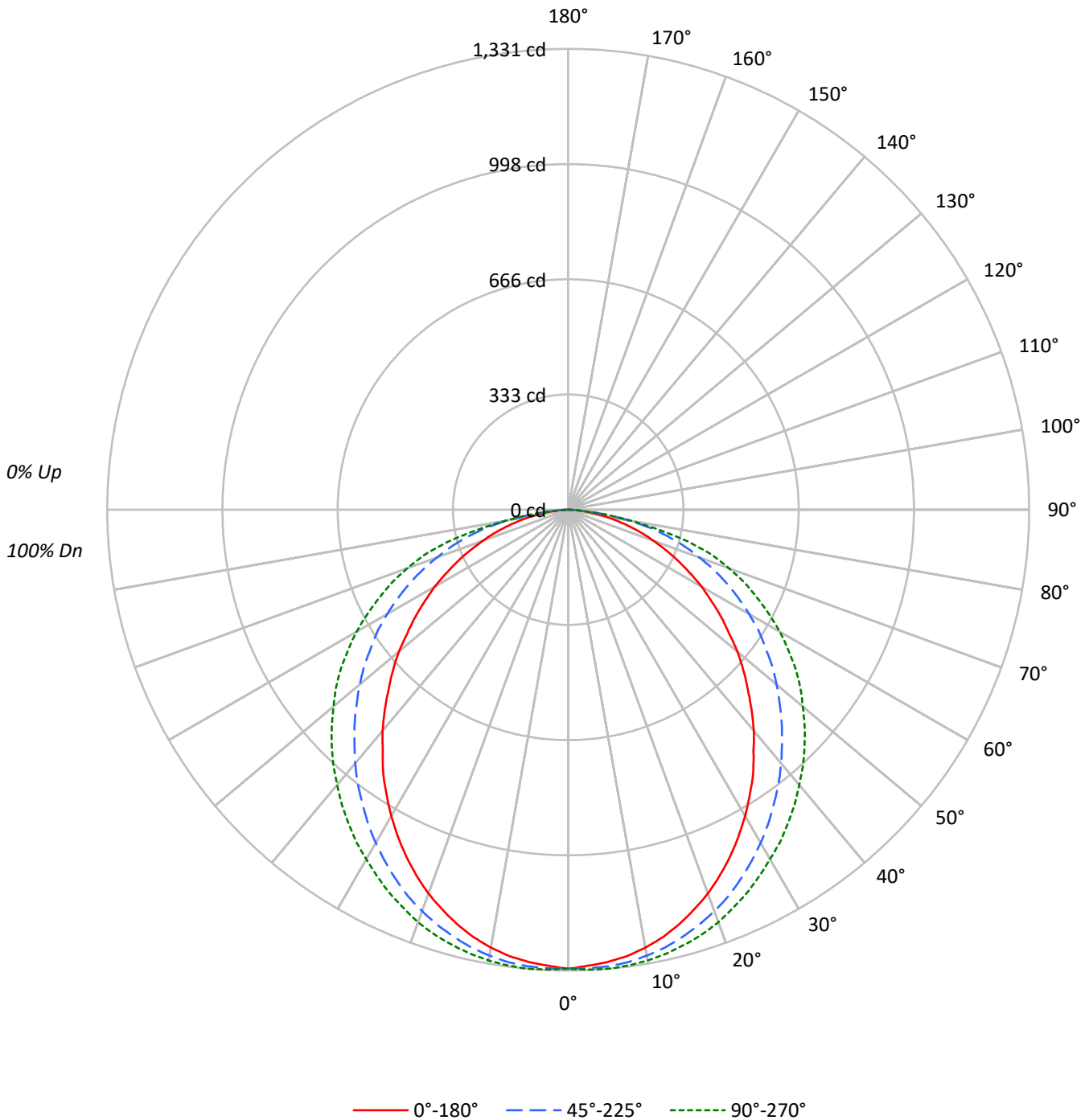
Input Watts (W): 26.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	3567	3567	3567
5°	3542	3576	3596
10°	3509	3573	3612
15°	3453	3557	3623
20°	3378	3533	3631
25°	3284	3497	3626
30°	3173	3453	3621
35°	3059	3402	3633
40°	2929	3360	3645
45°	2790	3318	3674
50°	2669	3288	3702
55°	2526	3262	3761
60°	2394	3248	3800
65°	2236	3222	3830
70°	2054	3174	3883
75°	1855	3090	3744
80°	1590	2737	2820
85°	1281	1612	1281



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.7	3.3
10°-20°	359.3	9.5
20°-30°	539.7	14.2
30°-40°	643.6	17.0
40°-50°	665.5	17.5
50°-60°	611.8	16.1
60°-70°	487.1	12.8
70°-80°	297.6	7.8
80°-90°	64.7	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°	1024.7	27.0
0°-40°	1668.3	44.0
0°-60°	2945.6	77.6
0°-90°	3794.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3794.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1326	1326	1326	1326	1326	
5°	1311	1315	1324	1329	1331	124
15°	1239	1254	1277	1295	1300	349
25°	1106	1133	1178	1210	1221	509
35°	931	971	1036	1090	1106	581
45°	733	785	872	942	965	567
55°	538	598	695	774	802	482
65°	351	411	506	576	602	348
75°	178	231	297	349	360	190
85°	42	50	52	45	42	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1325.6	1325.6	1325.6	1325.6	1325.6
2.5°	1318.4	1320.2	1325.6	1329.4	1329.4
5°	1311.2	1314.8	1323.8	1329.4	1331.2
7.5°	1300.5	1305.8	1318.4	1325.6	1327.6
10°	1284.3	1291.5	1307.6	1318.4	1322.0
12.5°	1264.4	1275.1	1295.1	1309.4	1313.0
15°	1239.3	1253.6	1276.9	1295.1	1300.5
17.5°	1210.4	1228.3	1257.2	1278.9	1286.1
20°	1179.7	1197.8	1233.9	1259.0	1268.0
22.5°	1143.8	1167.1	1208.6	1237.5	1244.7
25°	1105.9	1132.8	1177.9	1210.4	1221.1
27.5°	1064.5	1097.0	1145.6	1185.3	1194.2
30°	1021.2	1055.5	1111.3	1154.6	1165.3
32.5°	976.2	1015.9	1075.2	1123.9	1138.4
35°	931.2	970.8	1035.6	1089.8	1105.9
37.5°	878.9	925.8	997.9	1053.7	1073.5
40°	833.9	878.9	956.5	1017.6	1037.6
42.5°	783.5	832.1	913.2	979.8	1003.3
45°	733.0	785.3	871.8	942.1	965.4
47.5°	686.2	738.4	828.5	902.5	925.8
50°	637.6	691.6	785.3	861.0	884.3
52.5°	585.4	644.7	742.0	817.7	844.9
55°	538.5	597.9	695.2	774.5	801.6
57.5°	489.9	551.1	652.1	727.7	753.0
60°	444.8	504.2	603.5	677.2	706.1
62.5°	396.2	457.4	554.7	626.8	653.9
65°	351.2	410.8	506.0	576.4	601.5
67.5°	306.1	365.7	455.6	522.4	551.1
70°	261.1	320.7	403.4	468.4	493.5
72.5°	221.6	273.8	353.0	412.6	435.9
75°	178.4	230.6	297.2	349.4	360.1
77.5°	138.7	185.6	241.4	264.7	268.5
80°	102.6	138.7	176.6	182.0	182.0
82.5°	68.4	95.5	109.8	111.6	109.8
85°	41.5	50.4	52.2	45.0	41.5
87.5°	14.3	14.3	9.0	5.4	1.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)