

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: P474822

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

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474822  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-39-UNV-L840-CD1-U  
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4017.8 lumens  
Efficiency: N/A  
Efficacy: 137.1 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

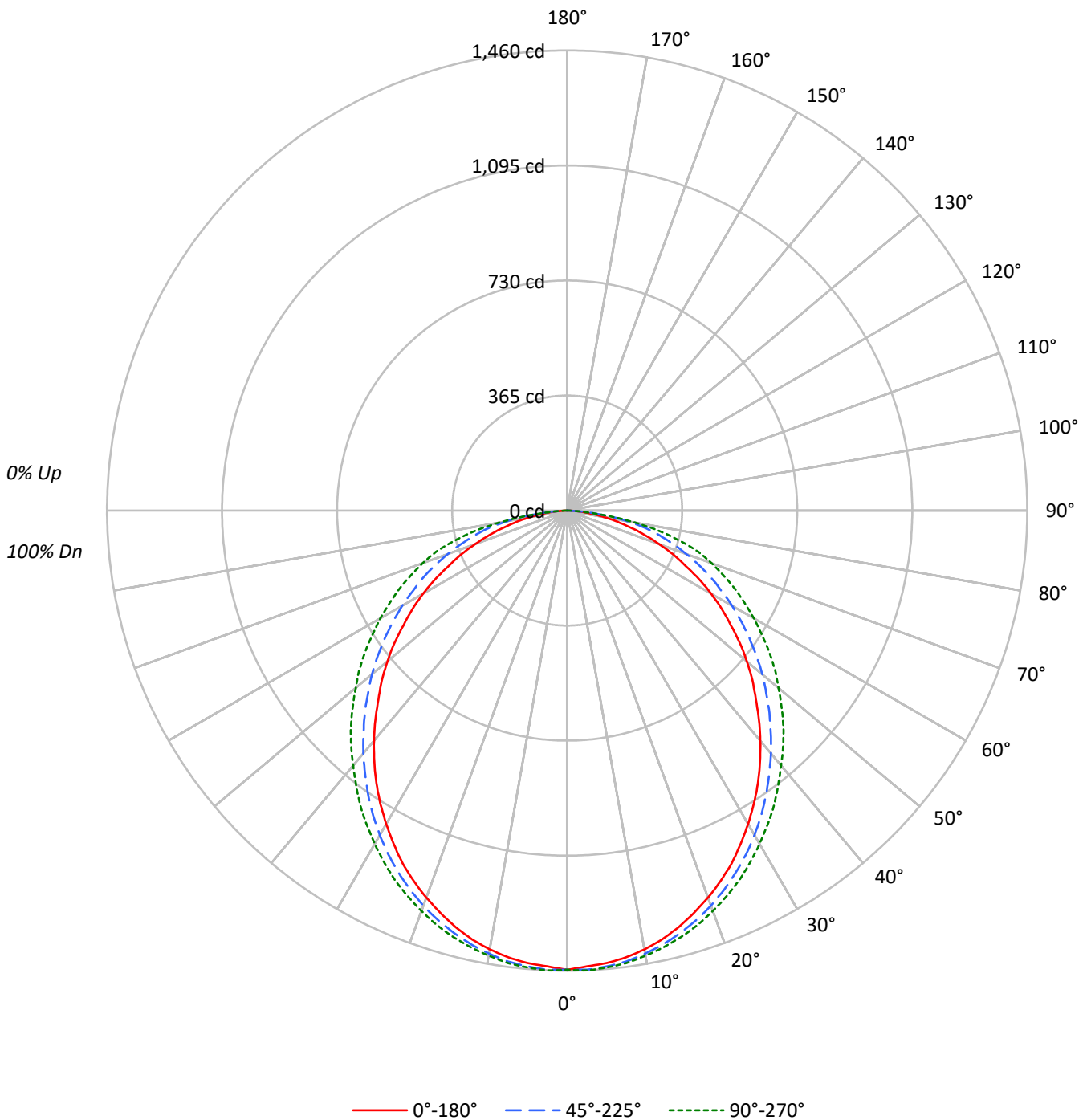
Input Watts (W): 29.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	73	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	3921	3921	3921
5°	3892	3922	3931
10°	3863	3900	3919
15°	3811	3865	3901
20°	3742	3820	3871
25°	3668	3761	3840
30°	3567	3694	3794
35°	3467	3615	3757
40°	3349	3535	3711
45°	3221	3454	3693
50°	3118	3384	3665
55°	2972	3310	3673
60°	2838	3254	3683
65°	2639	3212	3741
70°	2438	3167	3835
75°	2180	3151	3858
80°	1829	2986	3369
85°	1417	2044	1914



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	137.7	3.4
10°-20°	390.8	9.7
20°-30°	582.7	14.5
30°-40°	687.8	17.1
40°-50°	701.0	17.4
50°-60°	632.2	15.7
60°-70°	496.9	12.4
70°-80°	311.1	7.7
80°-90°	77.6	1.9
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°	1111.1	27.7
0°-40°	1798.9	44.8
0°-60°	3132.2	78.0
0°-90°	4017.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4017.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1457	1457	1457	1457	1457	
5°	1441	1444	1452	1455	1455	137
15°	1368	1374	1387	1398	1400	385
25°	1235	1245	1267	1286	1293	568
35°	1055	1069	1100	1131	1144	659
45°	846	865	908	952	970	655
55°	633	653	706	760	783	569
65°	414	440	504	560	588	413
75°	210	241	303	358	371	223
85°	46	59	66	66	62	55
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1457.0	1457.0	1457.0	1457.0	1457.0
2.5°	1447.7	1451.1	1457.9	1460.4	1460.4
5°	1440.9	1444.3	1452.0	1455.3	1455.3
7.5°	1429.9	1433.3	1442.6	1446.9	1447.7
10°	1413.7	1418.0	1427.3	1434.1	1434.1
12.5°	1393.4	1397.6	1409.5	1418.0	1418.8
15°	1367.9	1373.8	1387.4	1397.6	1400.2
17.5°	1338.2	1347.5	1362.8	1375.5	1378.1
20°	1306.8	1316.1	1333.9	1348.4	1351.8
22.5°	1271.9	1280.4	1301.7	1319.5	1323.7
25°	1235.4	1244.8	1266.8	1286.4	1293.2
27.5°	1192.1	1203.2	1229.5	1251.6	1258.4
30°	1148.0	1161.6	1188.7	1213.4	1221.0
32.5°	1103.0	1115.7	1146.3	1172.6	1182.8
35°	1055.4	1069.0	1100.4	1131.0	1143.7
37.5°	1005.3	1018.9	1052.9	1087.7	1099.6
40°	953.5	969.7	1006.2	1043.5	1056.3
42.5°	900.9	917.9	956.1	997.7	1014.7
45°	846.5	865.2	907.7	951.8	970.5
47.5°	797.3	812.6	856.7	905.1	923.0
50°	744.7	759.1	808.3	856.7	875.4
52.5°	691.2	704.7	757.4	808.3	831.3
55°	633.4	653.0	705.6	759.9	782.9
57.5°	582.5	600.3	654.7	709.8	731.9
60°	527.3	546.0	604.6	660.6	684.4
62.5°	472.1	492.5	551.9	612.2	634.3
65°	414.4	439.8	504.4	560.4	587.6
67.5°	365.1	389.7	453.4	512.0	535.8
70°	309.9	338.8	402.5	461.9	487.4
72.5°	258.1	287.0	352.4	411.8	437.3
75°	209.7	241.1	303.1	357.5	371.1
77.5°	163.0	192.7	254.7	286.1	300.6
80°	118.0	146.9	192.7	214.0	217.4
82.5°	79.8	104.4	130.8	136.7	133.3
85°	45.9	58.6	66.2	66.2	62.0
87.5°	18.7	18.7	16.1	10.2	5.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)