

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: P474949

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

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474949  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-39VHE-S-UNV-L840-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4074.6 lumens  
Efficiency: N/A  
Efficacy: 152.6 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

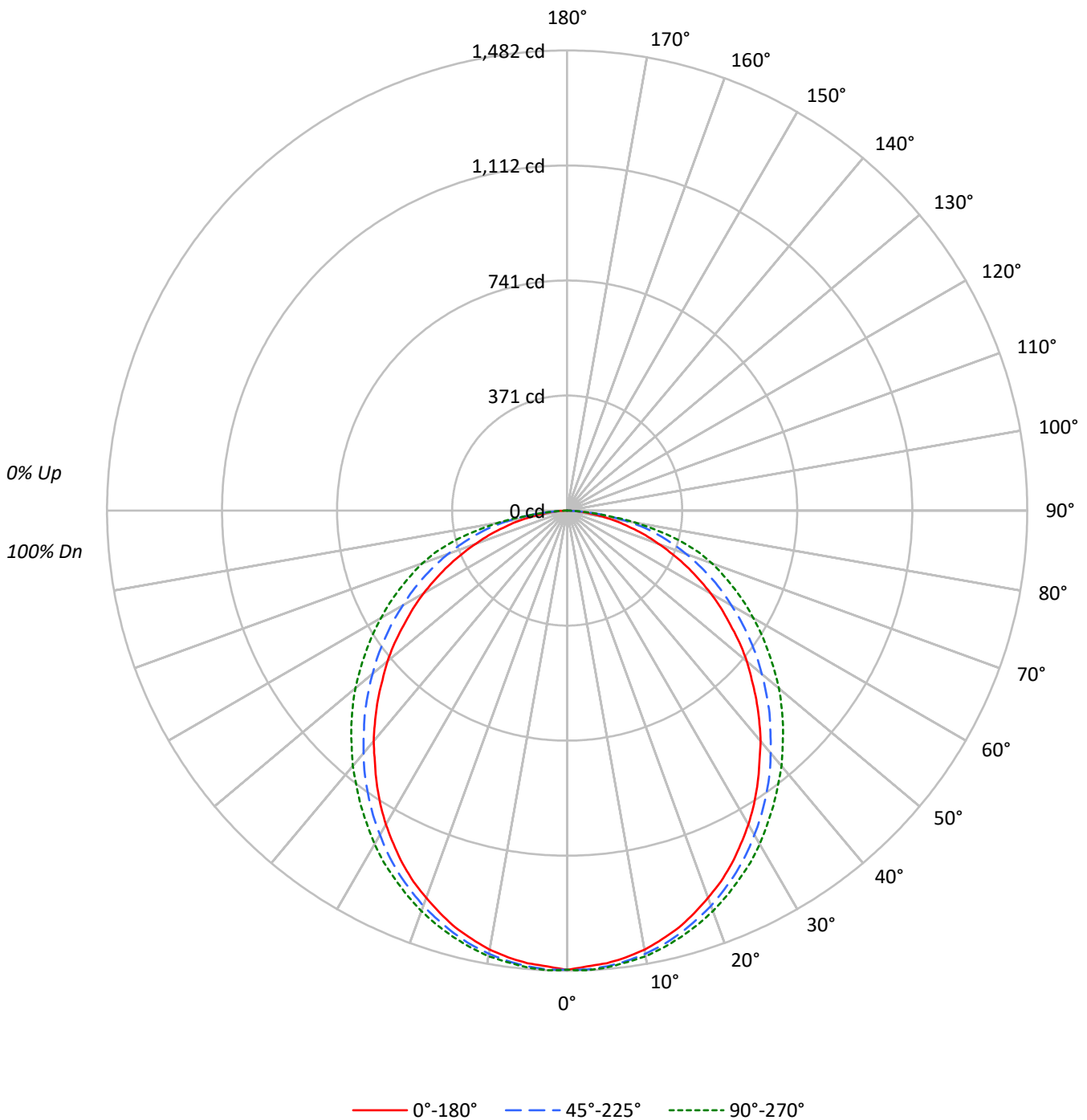
Input Watts (W): 26.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P474949

CATALOG NUMBER: 22CZ2-39VHE-S-UNV-L840-CD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P474949

CATALOG NUMBER: 22CZ2-39VHE-S-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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	88	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	74	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	32	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	3980	3980	3980
5°	3953	3979	3990
10°	3923	3961	3982
15°	3873	3926	3958
20°	3801	3880	3931
25°	3724	3821	3891
30°	3628	3747	3855
35°	3515	3670	3806
40°	3405	3582	3772
45°	3280	3505	3741
50°	3162	3426	3728
55°	3012	3359	3710
60°	2876	3291	3725
65°	2700	3252	3780
70°	2467	3212	3902
75°	2215	3189	3906
80°	1864	3011	3468
85°	1402	2041	1886



TEST NUMBER: P474949

CATALOG NUMBER: 22CZ2-39VHE-S-UNV-L840-CD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.7	3.4
10°-20°	396.7	9.7
20°-30°	591.5	14.5
30°-40°	698.0	17.1
40°-50°	711.1	17.5
50°-60°	641.3	15.7
60°-70°	503.7	12.4
70°-80°	314.9	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°	1128.0	27.7
0°-40°	1826.0	44.8
0°-60°	3178.4	78.0
0°-90°	4074.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4074.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1479	1479	1479	1479	1479	
5°	1463	1466	1473	1476	1477	139
15°	1390	1395	1409	1419	1421	391
25°	1254	1261	1287	1306	1310	577
35°	1070	1085	1117	1148	1159	669
45°	862	877	921	965	983	665
55°	642	663	716	771	791	576
65°	424	447	511	568	594	419
75°	213	243	307	359	376	228
85°	45	58	66	65	61	55
90°	0	0	0	0	0	



TEST NUMBER: P474949

CATALOG NUMBER: 22CZ2-39VHE-S-UNV-L840-CD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1479.1	1479.1	1479.1	1479.1	1479.1
2.5°	1469.2	1472.2	1479.1	1482.0	1482.0
5°	1463.3	1466.3	1473.2	1476.1	1477.1
7.5°	1451.5	1455.4	1463.3	1467.2	1467.2
10°	1435.7	1440.6	1449.5	1455.4	1457.4
12.5°	1414.0	1419.9	1431.7	1438.7	1440.6
15°	1390.3	1395.3	1409.1	1418.9	1420.9
17.5°	1359.8	1367.7	1382.4	1395.3	1398.2
20°	1327.2	1336.1	1354.8	1369.6	1372.6
22.5°	1293.7	1300.6	1321.3	1339.1	1343.0
25°	1254.3	1261.2	1286.8	1305.5	1310.5
27.5°	1210.9	1222.7	1248.3	1270.0	1277.9
30°	1167.5	1179.3	1205.9	1231.6	1240.5
32.5°	1120.2	1133.0	1163.5	1190.2	1199.0
35°	1069.9	1084.7	1117.2	1147.8	1158.6
37.5°	1017.6	1034.4	1070.9	1103.4	1115.2
40°	969.3	981.1	1019.6	1057.0	1073.8
42.5°	915.1	930.8	969.3	1011.7	1027.5
45°	861.8	876.6	921.0	965.3	983.1
47.5°	806.6	825.3	869.7	919.0	936.8
50°	755.3	771.1	818.4	870.7	890.4
52.5°	700.1	716.9	768.1	822.4	840.1
55°	641.9	662.6	715.9	771.1	790.8
57.5°	588.7	608.4	664.6	721.8	742.5
60°	534.4	554.2	611.4	669.5	692.2
62.5°	477.2	499.9	562.1	618.3	643.9
65°	424.0	446.7	510.8	568.0	593.6
67.5°	367.8	394.4	458.5	518.7	544.3
70°	313.6	345.1	408.2	467.4	496.0
72.5°	265.2	290.9	357.0	419.1	442.7
75°	213.0	242.6	306.7	358.9	375.7
77.5°	168.6	194.3	255.4	289.9	300.7
80°	120.3	148.9	194.3	215.0	223.8
82.5°	79.9	103.5	132.1	136.1	134.1
85°	45.4	58.2	66.1	65.1	61.1
87.5°	17.7	19.7	14.8	8.9	6.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)