

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: P474082

Luminaire Tested: **24CZ2-30VHE-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474082  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-30VHE-S-UNV-L840-CD1-U  
Description: 2'X4' 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: 3153.5 lumens  
Efficiency: N/A  
Efficacy: 153.8 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

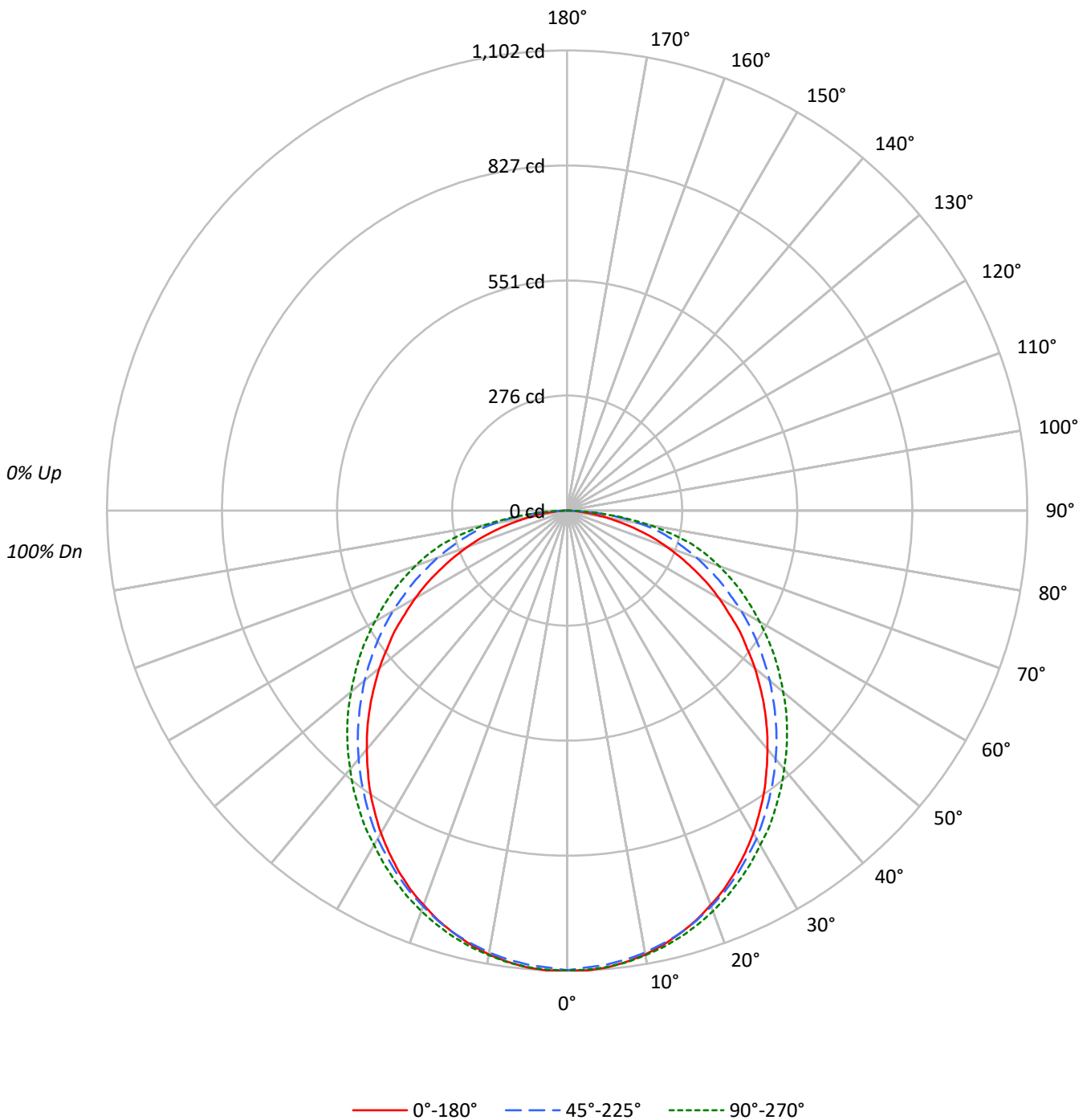
Input Watts (W): 20.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

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

	0°	45°	90°
0°	1481	1481	1481
5°	1483	1474	1482
10°	1475	1468	1477
15°	1460	1459	1471
20°	1440	1444	1462
25°	1416	1428	1450
30°	1386	1410	1436
35°	1351	1385	1429
40°	1311	1365	1420
45°	1271	1343	1417
50°	1229	1325	1414
55°	1185	1309	1422
60°	1130	1296	1432
65°	1070	1291	1466
70°	998	1298	1518
75°	888	1336	1600
80°	727	1364	1561
85°	513	1192	1215



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	104.1	3.3
10°-20°	296.4	9.4
20°-30°	444.3	14.1
30°-40°	529.1	16.8
40°-50°	545.6	17.3
50°-60°	497.9	15.8
60°-70°	398.1	12.6
70°-80°	260.0	8.2
80°-90°	78.1	2.5
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°	844.7	26.8
0°-40°	1373.9	43.6
0°-60°	2417.3	76.7
0°-90°	3153.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3153.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1101	1101	1101	1101	1101	
5°	1098	1096	1091	1098	1097	104
15°	1048	1048	1047	1056	1056	295
25°	954	955	962	976	977	439
35°	823	828	843	864	870	514
45°	668	680	706	736	745	515
55°	505	520	558	595	606	450
65°	336	359	406	446	460	333
75°	171	199	257	298	308	182
85°	33	60	77	79	79	42
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1100.7	1100.7	1100.7	1100.7	1100.7
2.5°	1102.3	1100.7	1095.0	1101.7	1100.7
5°	1098.1	1096.1	1091.4	1098.1	1097.1
7.5°	1089.8	1088.8	1084.1	1091.9	1090.9
10°	1079.5	1078.4	1074.8	1082.6	1081.0
12.5°	1065.0	1064.5	1061.9	1071.2	1070.2
15°	1047.9	1048.4	1047.4	1056.2	1056.2
17.5°	1028.2	1027.7	1029.7	1040.6	1039.6
20°	1005.4	1005.9	1008.5	1020.9	1020.9
22.5°	981.6	981.1	986.8	999.2	1000.2
25°	953.6	955.2	961.9	975.9	976.9
27.5°	923.6	926.2	934.4	950.5	952.1
30°	892.0	895.1	907.5	922.5	924.6
32.5°	857.3	864.0	875.4	894.6	899.7
35°	822.6	828.3	843.3	864.5	869.7
37.5°	784.2	793.5	810.6	834.0	840.7
40°	746.4	755.7	777.0	801.3	808.6
42.5°	708.1	717.9	742.3	769.7	777.5
45°	668.2	680.1	706.0	735.5	744.9
47.5°	627.3	641.3	669.2	701.3	711.7
50°	586.9	600.9	633.0	666.1	675.4
52.5°	543.4	561.0	595.2	630.9	640.2
55°	505.0	519.5	557.9	594.6	606.0
57.5°	460.0	479.7	520.6	557.9	568.7
60°	420.1	438.2	481.7	519.5	532.0
62.5°	379.7	398.3	441.8	484.8	496.2
65°	336.2	359.0	405.6	445.5	460.5
67.5°	294.7	318.6	366.2	408.7	424.2
70°	253.8	278.2	330.0	373.5	385.9
72.5°	213.4	238.8	292.7	335.1	349.6
75°	170.9	199.4	256.9	298.4	307.7
77.5°	131.0	162.6	220.7	248.6	255.4
80°	93.8	128.5	176.1	196.3	201.5
82.5°	61.6	95.3	131.6	142.4	140.9
85°	33.2	59.6	77.2	78.7	78.7
87.5°	12.9	23.8	24.3	18.6	17.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)