

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: P473982

Luminaire Tested: **24CZ2-30VHE-S-UNV-L830-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P473982  
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-L830-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2986.4 lumens  
Efficiency: N/A  
Efficacy: 145.7 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

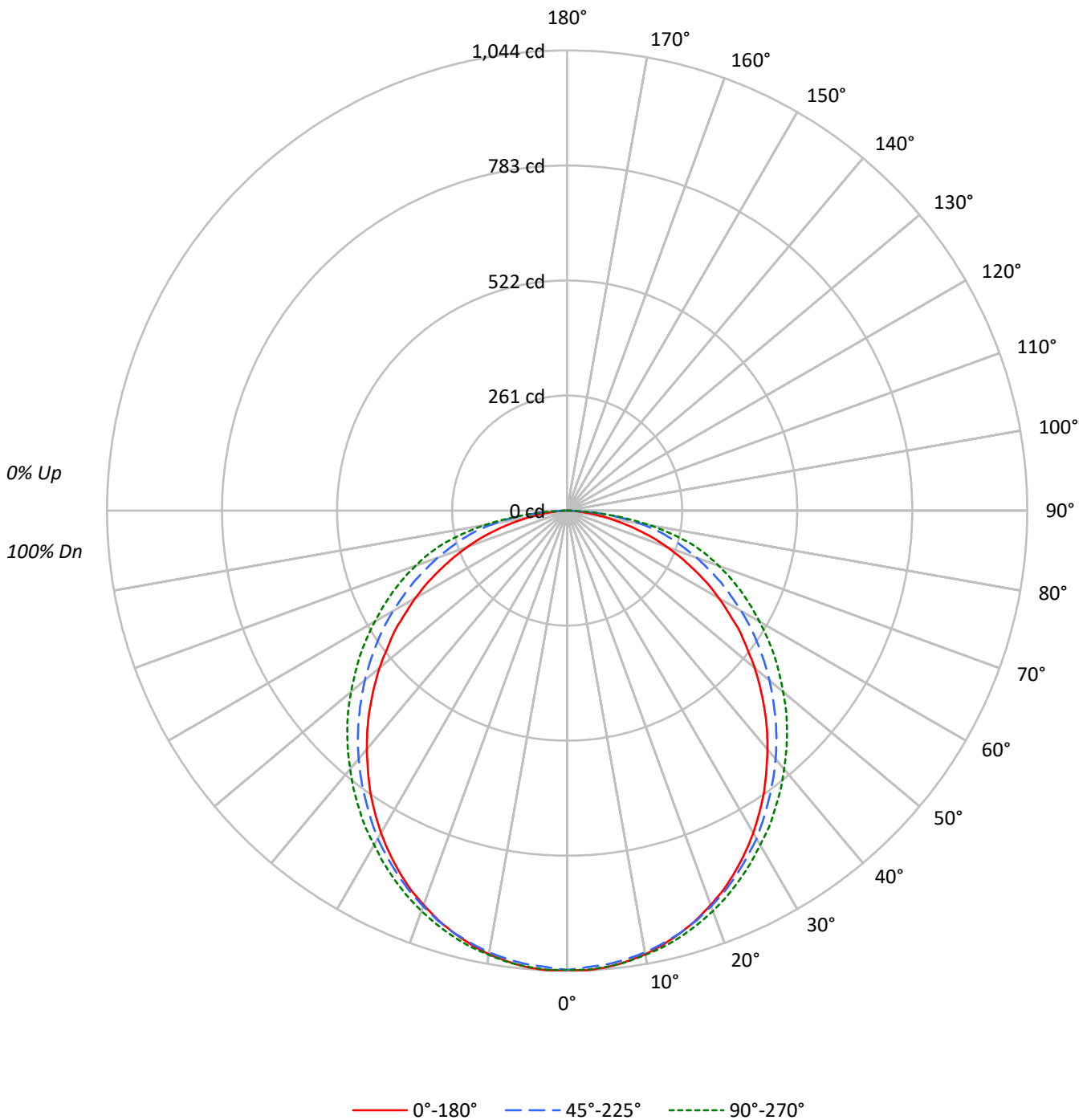
Input Watts (W): 20.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1403	1403	1403
5°	1405	1396	1403
10°	1397	1391	1399
15°	1382	1382	1393
20°	1363	1368	1384
25°	1341	1352	1373
30°	1312	1335	1360
35°	1280	1312	1353
40°	1242	1292	1345
45°	1204	1272	1342
50°	1163	1255	1339
55°	1122	1239	1346
60°	1070	1228	1356
65°	1014	1223	1388
70°	946	1229	1437
75°	842	1265	1515
80°	688	1292	1478
85°	485	1129	1152



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	98.5	3.3
10°-20°	280.7	9.4
20°-30°	420.7	14.1
30°-40°	501.1	16.8
40°-50°	516.7	17.3
50°-60°	471.5	15.8
60°-70°	377.0	12.6
70°-80°	246.3	8.2
80°-90°	74.0	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°	799.9	26.8
0°-40°	1301.0	43.6
0°-60°	2289.2	76.7
0°-90°	2986.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2986.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1042	1042	1042	1042	1042	
5°	1040	1038	1034	1040	1039	99
15°	992	993	992	1000	1000	280
25°	903	904	911	924	925	416
35°	779	784	799	819	824	487
45°	633	644	669	697	705	488
55°	478	492	528	563	574	426
65°	318	340	384	422	436	316
75°	162	189	243	282	291	172
85°	31	56	73	75	75	40
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1042.4	1042.4	1042.4	1042.4	1042.4
2.5°	1043.9	1042.4	1037.0	1043.4	1042.4
5°	1039.9	1038.0	1033.6	1039.9	1038.9
7.5°	1032.1	1031.1	1026.7	1034.0	1033.1
10°	1022.3	1021.3	1017.9	1025.2	1023.7
12.5°	1008.5	1008.0	1005.6	1014.4	1013.4
15°	992.3	992.8	991.9	1000.2	1000.2
17.5°	973.7	973.2	975.2	985.5	984.5
20°	952.1	952.6	955.1	966.8	966.8
22.5°	929.6	929.1	934.5	946.2	947.2
25°	903.1	904.5	910.9	924.2	925.1
27.5°	874.6	877.1	884.9	900.1	901.6
30°	844.7	847.6	859.4	873.6	875.6
32.5°	811.8	818.2	829.0	847.2	852.1
35°	779.0	784.4	798.6	818.7	823.6
37.5°	742.7	751.5	767.7	789.8	796.1
40°	706.9	715.7	735.8	758.9	765.7
42.5°	670.6	679.9	702.9	728.9	736.3
45°	632.8	644.1	668.6	696.6	705.4
47.5°	594.0	607.3	633.8	664.2	674.0
50°	555.8	569.0	599.4	630.8	639.7
52.5°	514.6	531.2	563.6	597.5	606.3
55°	478.3	492.0	528.3	563.1	573.9
57.5°	435.6	454.2	493.0	528.3	538.6
60°	397.8	415.0	456.2	492.0	503.8
62.5°	359.6	377.2	418.4	459.1	469.9
65°	318.4	339.9	384.1	421.9	436.1
67.5°	279.1	301.7	346.8	387.0	401.7
70°	240.4	263.4	312.5	353.7	365.4
72.5°	202.1	226.1	277.2	317.4	331.1
75°	161.9	188.9	243.3	282.5	291.4
77.5°	124.1	154.0	209.0	235.5	241.8
80°	88.8	121.7	166.8	185.9	190.8
82.5°	58.4	90.3	124.6	134.9	133.4
85°	31.4	56.4	73.1	74.6	74.6
87.5°	12.3	22.6	23.1	17.7	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)