

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: P473961

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473961
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-30-S-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

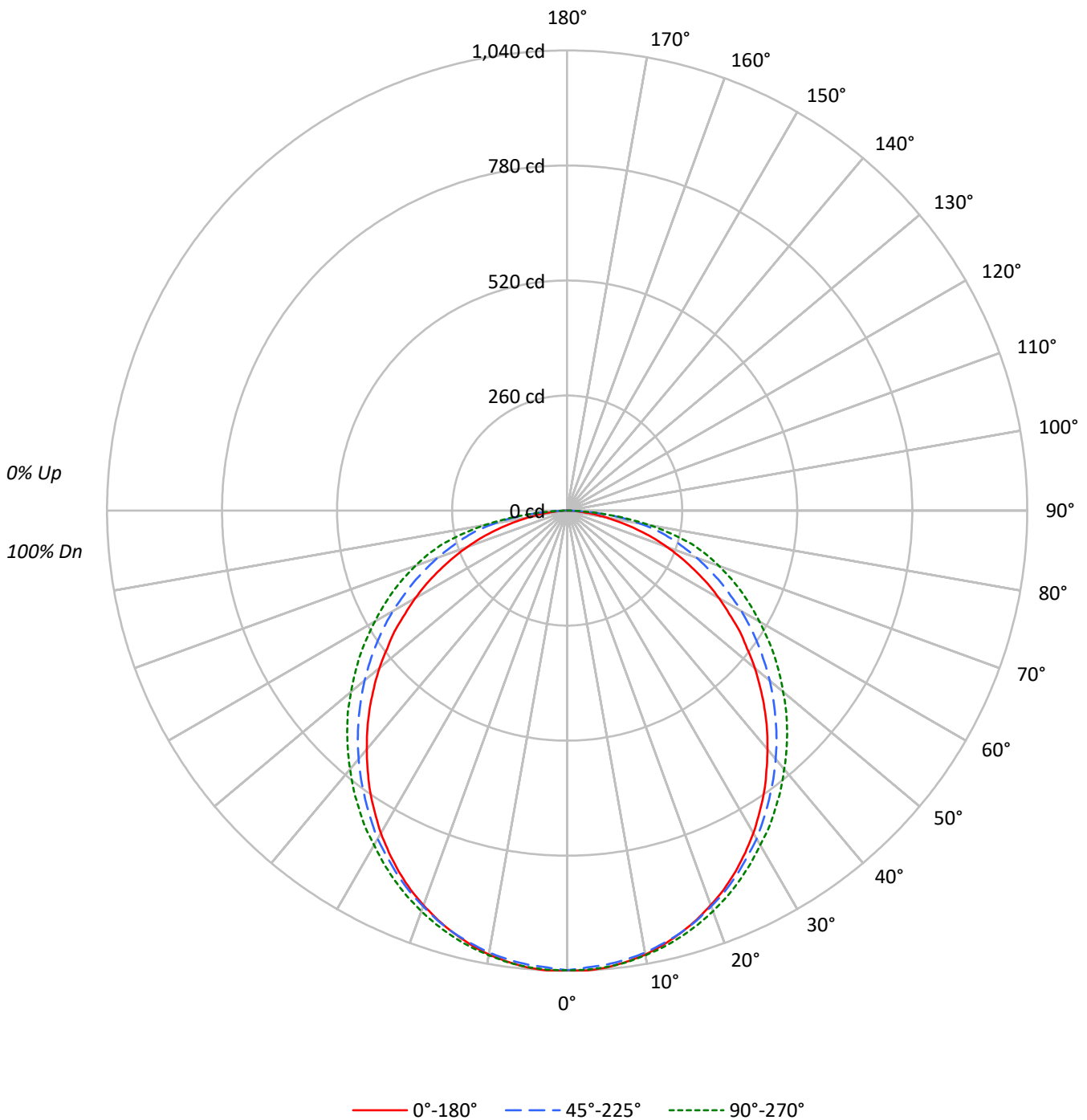
Lumens per Lamp: N/A
Luminaire Lumens: 2976.5 lumens
Efficiency: N/A
Efficacy: 126.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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°	1398	1398	1398
5°	1400	1391	1399
10°	1392	1386	1394
15°	1378	1377	1389
20°	1359	1363	1380
25°	1336	1348	1369
30°	1308	1331	1356
35°	1275	1307	1348
40°	1237	1288	1340
45°	1200	1268	1338
50°	1159	1251	1334
55°	1118	1235	1342
60°	1067	1224	1351
65°	1010	1219	1384
70°	943	1225	1433
75°	839	1261	1510
80°	686	1288	1474
85°	483	1124	1147



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	98.2	3.3
10°-20°	279.8	9.4
20°-30°	419.3	14.1
30°-40°	499.5	16.8
40°-50°	515.0	17.3
50°-60°	469.9	15.8
60°-70°	375.8	12.6
70°-80°	245.4	8.2
80°-90°	73.7	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°	797.3	26.8
0°-40°	1296.8	43.6
0°-60°	2281.7	76.7
0°-90°	2976.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2976.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1039	1039	1039	1039	1039	
5°	1036	1034	1030	1036	1036	98
15°	989	990	989	997	997	279
25°	900	902	908	921	922	414
35°	776	782	796	816	821	485
45°	631	642	666	694	703	486
55°	477	490	527	561	572	425
65°	317	339	383	420	435	315
75°	161	188	242	282	290	171
85°	31	56	73	74	74	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1038.9	1038.9	1038.9	1038.9	1038.9
2.5°	1040.4	1038.9	1033.6	1039.9	1038.9
5°	1036.5	1034.5	1030.1	1036.5	1035.5
7.5°	1028.7	1027.7	1023.3	1030.6	1029.7
10°	1018.9	1017.9	1014.5	1021.8	1020.4
12.5°	1005.2	1004.7	1002.3	1011.1	1010.1
15°	989.1	989.6	988.6	996.9	996.9
17.5°	970.5	970.0	972.0	982.2	981.3
20°	949.0	949.5	951.9	963.7	963.7
22.5°	926.5	926.0	931.4	943.1	944.1
25°	900.1	901.6	907.9	921.1	922.1
27.5°	871.7	874.2	882.0	897.2	898.6
30°	841.9	844.8	856.6	870.8	872.7
32.5°	809.2	815.5	826.3	844.4	849.2
35°	776.4	781.8	796.0	816.0	820.9
37.5°	740.2	749.0	765.2	787.2	793.5
40°	704.5	713.3	733.4	756.4	763.2
42.5°	668.3	677.6	700.6	726.5	733.9
45°	630.7	641.9	666.4	694.3	703.1
47.5°	592.1	605.3	631.7	662.0	671.8
50°	553.9	567.1	597.5	628.7	637.5
52.5°	512.9	529.5	561.8	595.5	604.3
55°	476.7	490.4	526.6	561.3	572.0
57.5°	434.2	452.7	491.4	526.6	536.8
60°	396.5	413.6	454.7	490.4	502.1
62.5°	358.4	376.0	417.0	457.6	468.4
65°	317.3	338.8	382.8	420.5	434.6
67.5°	278.2	300.7	345.7	385.8	400.4
70°	239.6	262.5	311.4	352.5	364.2
72.5°	201.4	225.4	276.2	316.3	330.0
75°	161.3	188.2	242.5	281.6	290.4
77.5°	123.7	153.5	208.3	234.7	241.0
80°	88.5	121.3	166.2	185.3	190.2
82.5°	58.2	90.0	124.2	134.5	133.0
85°	31.3	56.2	72.8	74.3	74.3
87.5°	12.2	22.5	23.0	17.6	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)