

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: P232457

Luminaire Tested: **4SRS-48-W-UNV-L835-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P232457  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1706-124-1)  
Test Lab: INNOVATION CENTER(G2)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4SRS-48-W-UNV-L835-CD1-U  
Description: WAVESTREAM LED RECESSED 4 FT FIXTURE  
Light Source: -  
Ballast/Driver: -

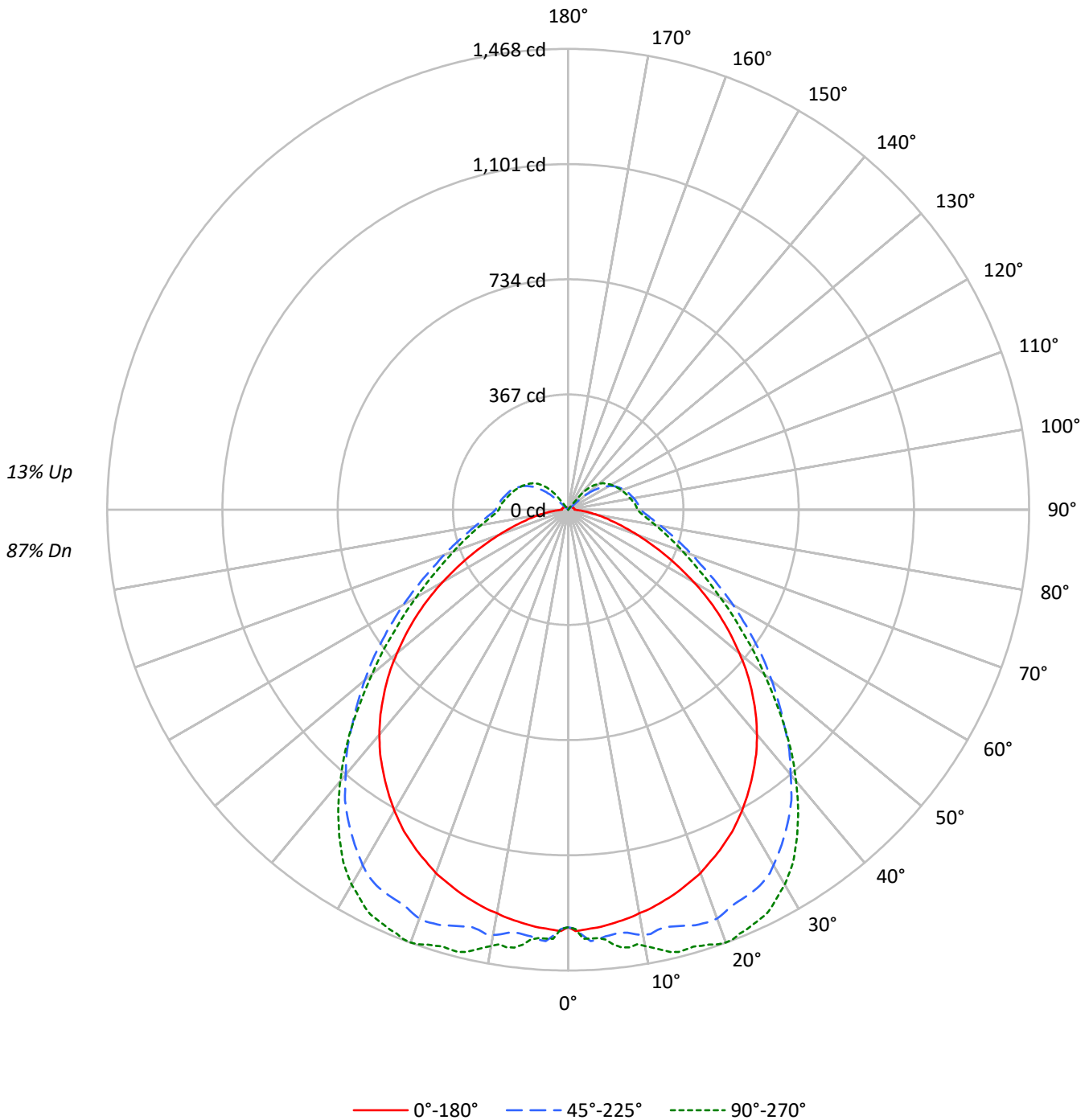
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4827.0 lumens  
Efficiency: N/A  
Efficacy: 149.4 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.44 / 1.44  
Luminous Opening: Rectangular w/ Sides (W: 0.02' x L: 3.88' x H: 0.3')  
CIE Type: Semi-Direct

Input Watts (W): 32.3  
Input Voltage (V): NR  
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	116	116	116	116	112	112	112	112	104	104	104	97	97	97	91	91	91	87
1	105	100	95	91	101	96	92	88	89	86	83	83	81	78	78	76	74	71
2	95	87	79	73	91	84	77	72	78	73	68	73	68	65	68	65	61	59
3	87	76	68	61	83	73	66	60	69	62	57	64	59	55	60	56	52	49
4	79	67	58	52	76	65	57	51	61	54	49	57	51	47	54	49	45	42
5	73	60	51	45	70	58	50	44	55	48	42	51	45	41	48	43	39	37
6	67	54	45	39	65	53	44	38	49	42	37	47	40	36	44	39	34	32
7	62	49	40	34	60	48	39	34	45	38	33	42	36	32	40	35	30	28
8	58	45	36	30	56	43	36	30	41	34	29	39	33	28	37	31	27	25
9	54	41	33	27	52	40	32	27	38	31	26	36	30	25	34	29	25	23
10	51	38	30	25	49	37	29	24	35	28	24	33	27	23	32	26	22	21

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

	0°	45°	90°
0°	236454	236454	236454
5°	235923	111535	92019
10°	232510	73373	58461
15°	229765	54673	43735
20°	226799	44282	35001
25°	222618	36373	28596
30°	217689	30494	23601
35°	211304	25263	19238
40°	203982	20713	15437
45°	193839	16851	12207
50°	180431	13663	9509
55°	164841	10996	7428
60°	145086	8828	5850
65°	122686	7045	4651
70°	100195	5714	3782
75°	79914	4709	3134
80°	65650	3951	2646
85°	50420	3392	2280



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	130.0	2.7
10°-20°	387.3	8.0
20°-30°	612.2	12.7
30°-40°	738.6	15.3
40°-50°	724.0	15.0
50°-60°	608.3	12.6
60°-70°	456.5	9.5
70°-80°	327.9	6.8
80°-90°	236.9	4.9
90°-100°	195.8	4.1
100°-110°	166.7	3.5
110°-120°	123.1	2.6
120°-130°	81.3	1.7
130°-140°	33.9	0.7
140°-150°	3.6	0.1
150°-160°	0.9	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	1129.5	23.4
0°-40°	1868.1	38.7
0°-60°	3200.5	66.3
0°-90°	4221.7	87.5
90°-120°	485.5	10.1
90°-150°	604.4	12.5
90°-180°	605.0	12.5
0°-180°	4827.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1330	1330	1330	1330	1330	
5°	1331	1354	1364	1367	1375	126
15°	1274	1297	1373	1441	1450	359
25°	1175	1228	1355	1418	1440	541
35°	1026	1104	1218	1268	1271	641
45°	830	896	973	984	973	639
55°	590	665	721	694	676	526
65°	339	454	502	473	463	338
75°	150	304	353	333	329	164
85°	46	210	259	244	244	47
90°	20	179	231	220	220	12
95°	19	170	222	212	213	16
105°	19	135	200	191	191	19
115°	16	58	171	172	170	16
125°	14	19	120	146	146	13
135°	12	13	8	93	105	9
145°	8	8	4	0	0	5
155°	4	4	2	0	0	2
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1329.9	1329.9	1329.9	1329.9	1329.9
1°	1342.6	1328.4	1335.9	1338.9	1335.9
2°	1339.6	1332.1	1357.6	1372.5	1368.0
3°	1336.6	1341.1	1376.3	1374.8	1368.0
4°	1334.4	1349.3	1372.5	1370.3	1368.0
5°	1330.7	1353.8	1364.3	1367.3	1374.8
6°	1326.2	1351.6	1360.6	1377.7	1393.4
7°	1321.7	1344.9	1357.6	1392.7	1405.4
8°	1317.2	1338.1	1360.6	1401.7	1407.7
9°	1312.0	1332.1	1369.5	1399.4	1401.7
10°	1305.2	1326.9	1375.5	1394.2	1411.4
11°	1300.8	1319.4	1377.0	1401.7	1421.9
12°	1294.8	1310.5	1368.8	1412.1	1433.8
13°	1288.0	1303.7	1364.3	1424.8	1445.8
14°	1280.6	1298.5	1368.8	1434.6	1451.8
15°	1273.8	1297.0	1373.3	1441.3	1450.3
16°	1266.4	1296.3	1377.7	1439.8	1448.0
17°	1257.4	1294.8	1384.5	1433.8	1452.5
18°	1248.4	1292.5	1386.0	1433.8	1456.2
19°	1240.9	1288.8	1388.2	1436.8	1464.5
20°	1232.0	1280.6	1386.0	1439.8	1467.5
21°	1220.0	1270.1	1378.5	1442.8	1465.2
22°	1208.8	1258.1	1368.8	1440.5	1457.0
23°	1198.3	1245.4	1362.1	1434.6	1453.3
24°	1187.1	1236.5	1358.3	1424.8	1446.5
25°	1175.2	1228.2	1354.6	1418.1	1440.5
26°	1162.5	1220.0	1350.1	1411.4	1435.3
27°	1150.5	1211.8	1344.1	1403.2	1423.4
28°	1136.3	1201.3	1335.1	1394.9	1407.7
29°	1121.3	1190.1	1323.9	1383.0	1392.7
30°	1107.1	1178.9	1308.2	1365.0	1379.2
32.5°	1067.5	1145.3	1265.6	1321.7	1332.9
35°	1025.6	1104.1	1218.5	1267.9	1270.8
37.5°	983.0	1058.5	1167.7	1202.8	1202.8
40°	935.2	1004.0	1101.9	1133.3	1129.6
42.5°	884.4	951.6	1042.8	1061.5	1053.3
45°	829.8	895.6	973.3	984.5	973.3
47.5°	773.7	838.0	909.0	909.8	891.1
50°	711.7	780.5	845.5	833.5	814.8
52.5°	651.1	722.9	784.9	761.0	746.1
55°	589.8	664.6	720.6	694.5	675.8
57.5°	526.3	607.0	661.6	633.2	616.7
60°	462.0	553.2	606.3	574.1	559.2
62.5°	398.4	500.1	551.7	521.0	508.3
65°	339.4	453.8	502.4	473.2	462.7



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
67.5°	284.1	408.9	457.5	431.3	422.4
70°	233.2	370.0	419.4	394.7	388.0
72.5°	189.9	334.9	385.0	362.6	357.3
75°	149.5	304.3	352.8	333.4	328.9
77.5°	119.6	277.3	324.4	307.2	304.3
80°	91.9	252.7	299.8	284.1	281.8
82.5°	67.3	230.2	277.3	262.4	261.6
85°	46.3	210.1	258.7	244.5	244.5
87.5°	29.9	193.6	242.2	228.8	230.2
90°	20.2	178.7	231.0	220.5	220.5
92.5°	20.2	175.7	227.3	216.8	217.5
95°	19.4	169.7	222.0	211.6	213.1
97.5°	19.4	163.0	216.8	205.6	207.1
100°	18.7	154.7	211.6	200.3	201.8
102.5°	18.7	145.8	205.6	195.9	195.9
105°	18.7	135.3	200.3	190.6	191.4
107.5°	17.9	123.3	195.1	186.1	186.1
110°	17.2	106.9	189.1	181.7	180.9
112.5°	17.2	86.0	180.9	177.2	175.7
115°	16.4	58.3	171.2	171.9	169.7
117.5°	15.7	25.4	163.0	166.7	164.5
120°	15.0	23.2	151.0	161.5	158.5
122.5°	15.0	20.9	136.8	154.7	152.5
125°	14.2	18.7	120.4	146.5	145.8
127.5°	14.2	17.2	99.4	136.8	138.3
130°	13.5	15.7	73.3	125.6	129.3
132.5°	12.7	14.2	15.0	111.4	118.1
135°	12.0	12.7	8.2	92.7	104.7
137.5°	11.2	11.2	7.5	69.5	86.7
140°	10.5	9.7	6.0	10.5	64.3
142.5°	9.0	9.0	5.2	0.7	2.2
145°	8.2	7.5	4.5	0.0	0.0
147.5°	7.5	6.7	3.7	0.0	0.0
150°	6.7	6.0	3.0	0.0	0.0
152.5°	6.0	4.5	2.2	0.0	0.0
155°	4.5	3.7	1.5	0.0	0.0
157.5°	3.7	3.0	0.7	0.0	0.0
160°	3.0	2.2	0.7	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)