

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: P232448

Luminaire Tested: **4SRS-32-W-UNV-L830-CD1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P232448
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-32-W-UNV-L830-CD1-U
Description: WAVESTREAM LED RECESSED 4 FT FIXTURE
Light Source: -
Ballast/Driver: -

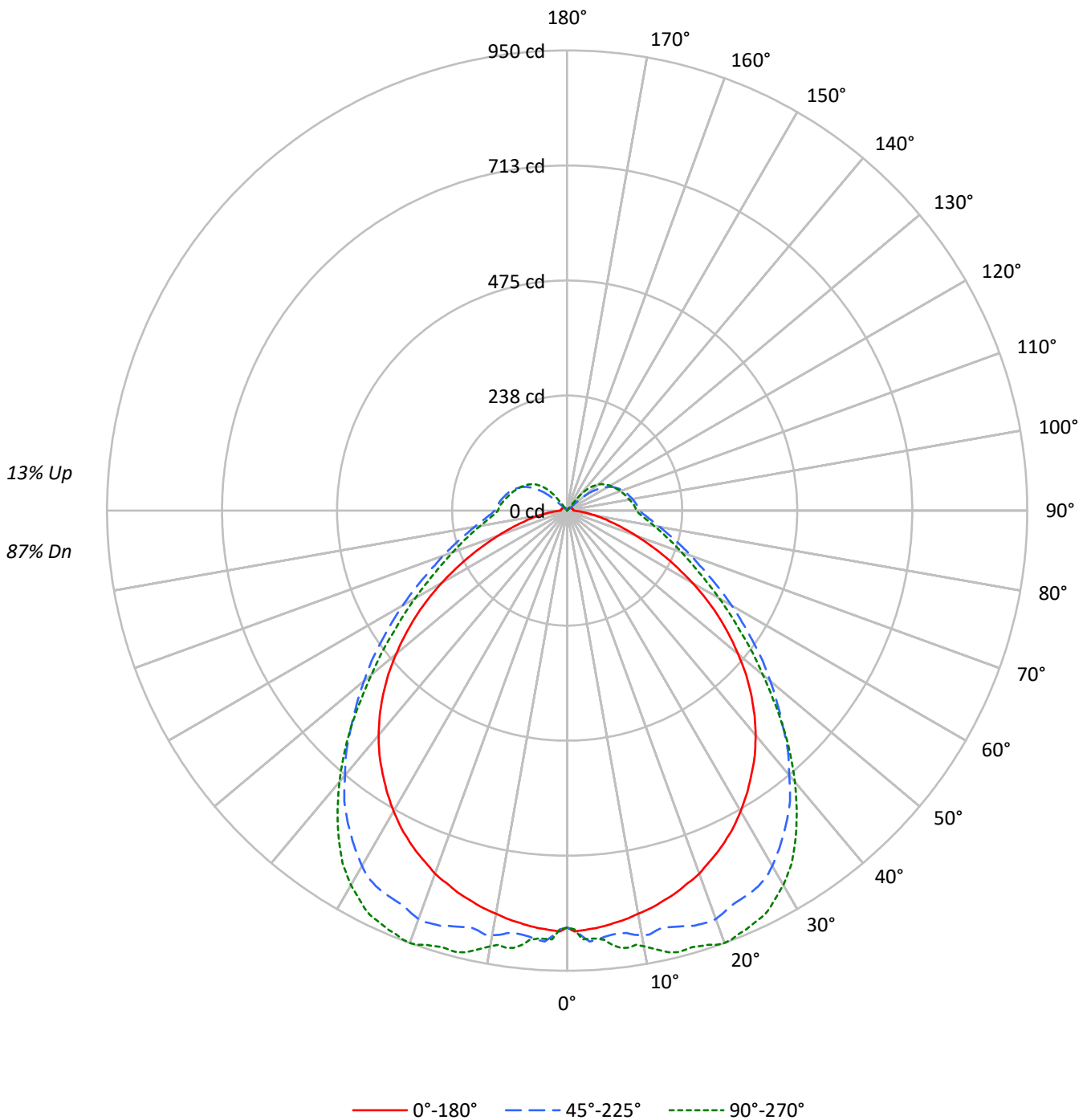
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3124.9 lumens
Efficiency: N/A
Efficacy: 148.8 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): 21
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	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°	153085	153085	153085
5°	152720	72204	59570
10°	150529	47502	37846
15°	148758	35392	28313
20°	146830	28668	22658
25°	144118	23546	18513
30°	140925	19741	15279
35°	136804	16354	12454
40°	132047	13408	9994
45°	125488	10909	7903
50°	116797	8846	6156
55°	106708	7119	4808
60°	93929	5715	3787
65°	79417	4560	3012
70°	64878	3699	2448
75°	51743	3048	2029
80°	42504	2558	1714
85°	32670	2195	1476



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.2	2.7
10°-20°	250.7	8.0
20°-30°	396.3	12.7
30°-40°	478.2	15.3
40°-50°	468.7	15.0
50°-60°	393.8	12.6
60°-70°	295.5	9.5
70°-80°	212.3	6.8
80°-90°	153.3	4.9
90°-100°	126.7	4.1
100°-110°	107.9	3.5
110°-120°	79.7	2.5
120°-130°	52.7	1.7
130°-140°	21.9	0.7
140°-150°	2.3	0.1
150°-160°	0.6	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	731.2	23.4
0°-40°	1209.4	38.7
0°-60°	2071.9	66.3
0°-90°	2733.0	87.5
90°-120°	314.3	10.1
90°-150°	391.3	12.5
90°-180°	392.0	12.5
0°-180°	3124.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	861	861	861	861	861	
5°	861	876	883	885	890	82
15°	825	840	889	933	939	233
25°	761	795	877	918	933	350
35°	664	715	789	821	823	415
45°	537	580	630	637	630	414
55°	382	430	466	450	438	340
65°	220	294	325	306	300	219
75°	97	197	228	216	213	106
85°	30	136	167	158	158	31
90°	13	116	150	143	143	8
95°	13	110	144	137	138	10
105°	12	88	130	123	124	13
115°	11	38	111	111	110	11
125°	9	12	78	95	94	8
135°	8	8	5	60	68	6
145°	5	5	3	0	0	3
155°	3	2	1	0	0	1
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°	861.0	861.0	861.0	861.0	861.0
1°	869.2	860.0	864.8	866.8	864.8
2°	867.2	862.4	878.9	888.5	885.6
3°	865.3	868.2	891.0	890.0	885.6
4°	863.9	873.5	888.5	887.1	885.6
5°	861.4	876.4	883.2	885.2	890.0
6°	858.5	875.0	880.8	891.9	902.1
7°	855.6	870.6	878.9	901.6	909.8
8°	852.7	866.3	880.8	907.4	911.3
9°	849.3	862.4	886.6	906.0	907.4
10°	845.0	859.0	890.5	902.6	913.7
11°	842.1	854.2	891.4	907.4	920.5
12°	838.2	848.4	886.1	914.2	928.2
13°	833.9	844.0	883.2	922.4	936.0
14°	829.0	840.6	886.1	928.7	939.8
15°	824.7	839.7	889.0	933.1	938.9
16°	819.8	839.2	891.9	932.1	937.4
17°	814.0	838.2	896.3	928.2	940.3
18°	808.2	836.8	897.3	928.2	942.7
19°	803.4	834.3	898.7	930.2	948.1
20°	797.6	829.0	897.3	932.1	950.0
21°	789.8	822.2	892.4	934.0	948.5
22°	782.6	814.5	886.1	932.6	943.2
23°	775.8	806.3	881.8	928.7	940.8
24°	768.5	800.5	879.3	922.4	936.5
25°	760.8	795.1	876.9	918.1	932.6
26°	752.5	789.8	874.0	913.7	929.2
27°	744.8	784.5	870.1	908.4	921.4
28°	735.6	777.7	864.3	903.1	911.3
29°	725.9	770.5	857.1	895.3	901.6
30°	716.7	763.2	846.9	883.7	892.9
32.5°	691.1	741.4	819.3	855.6	862.9
35°	664.0	714.8	788.8	820.8	822.7
37.5°	636.4	685.3	755.9	778.7	778.7
40°	605.4	649.9	713.3	733.7	731.3
42.5°	572.5	616.1	675.1	687.2	681.9
45°	537.2	579.8	630.1	637.4	630.1
47.5°	500.9	542.5	588.5	589.0	576.9
50°	460.7	505.2	547.4	539.6	527.5
52.5°	421.5	468.0	508.2	492.7	483.0
55°	381.8	430.2	466.5	449.6	437.5
57.5°	340.7	393.0	428.3	409.9	399.3
60°	299.1	358.1	392.5	371.7	362.0
62.5°	257.9	323.8	357.2	337.3	329.1
65°	219.7	293.8	325.2	306.3	299.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
67.5°	183.9	264.7	296.2	279.2	273.4
70°	151.0	239.6	271.5	255.5	251.2
72.5°	122.9	216.8	249.2	234.7	231.3
75°	96.8	197.0	228.4	215.8	212.9
77.5°	77.4	179.5	210.0	198.9	197.0
80°	59.5	163.6	194.1	183.9	182.5
82.5°	43.6	149.1	179.5	169.9	169.4
85°	30.0	136.0	167.4	158.3	158.3
87.5°	19.4	125.3	156.8	148.1	149.1
90°	13.1	115.7	149.5	142.8	142.8
92.5°	13.1	113.7	147.1	140.3	140.8
95°	12.6	109.9	143.7	137.0	137.9
97.5°	12.6	105.5	140.3	133.1	134.1
100°	12.1	100.2	137.0	129.7	130.7
102.5°	12.1	94.4	133.1	126.8	126.8
105°	12.1	87.6	129.7	123.4	123.9
107.5°	11.6	79.9	126.3	120.5	120.5
110°	11.1	69.2	122.4	117.6	117.1
112.5°	11.1	55.7	117.1	114.7	113.7
115°	10.6	37.7	110.8	111.3	109.9
117.5°	10.2	16.5	105.5	107.9	106.5
120°	9.7	15.0	97.8	104.5	102.6
122.5°	9.7	13.6	88.6	100.2	98.7
125°	9.2	12.1	77.9	94.9	94.4
127.5°	9.2	11.1	64.4	88.6	89.5
130°	8.7	10.2	47.4	81.3	83.7
132.5°	8.2	9.2	9.7	72.1	76.5
135°	7.7	8.2	5.3	60.0	67.8
137.5°	7.3	7.3	4.8	45.0	56.1
140°	6.8	6.3	3.9	6.8	41.6
142.5°	5.8	5.8	3.4	0.5	1.5
145°	5.3	4.8	2.9	0.0	0.0
147.5°	4.8	4.4	2.4	0.0	0.0
150°	4.4	3.9	1.9	0.0	0.0
152.5°	3.9	2.9	1.5	0.0	0.0
155°	2.9	2.4	1.0	0.0	0.0
157.5°	2.4	1.9	0.5	0.0	0.0
160°	1.9	1.5	0.5	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)