

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: P232462

Luminaire Tested: **4SRS-56-W-UNV-L840-CD1-U**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: P232462  
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-56-W-UNV-L840-CD1-U  
Description: WAVESTREAM LED RECESSED 4 FT FIXTURE  
Light Source: -  
Ballast/Driver: -

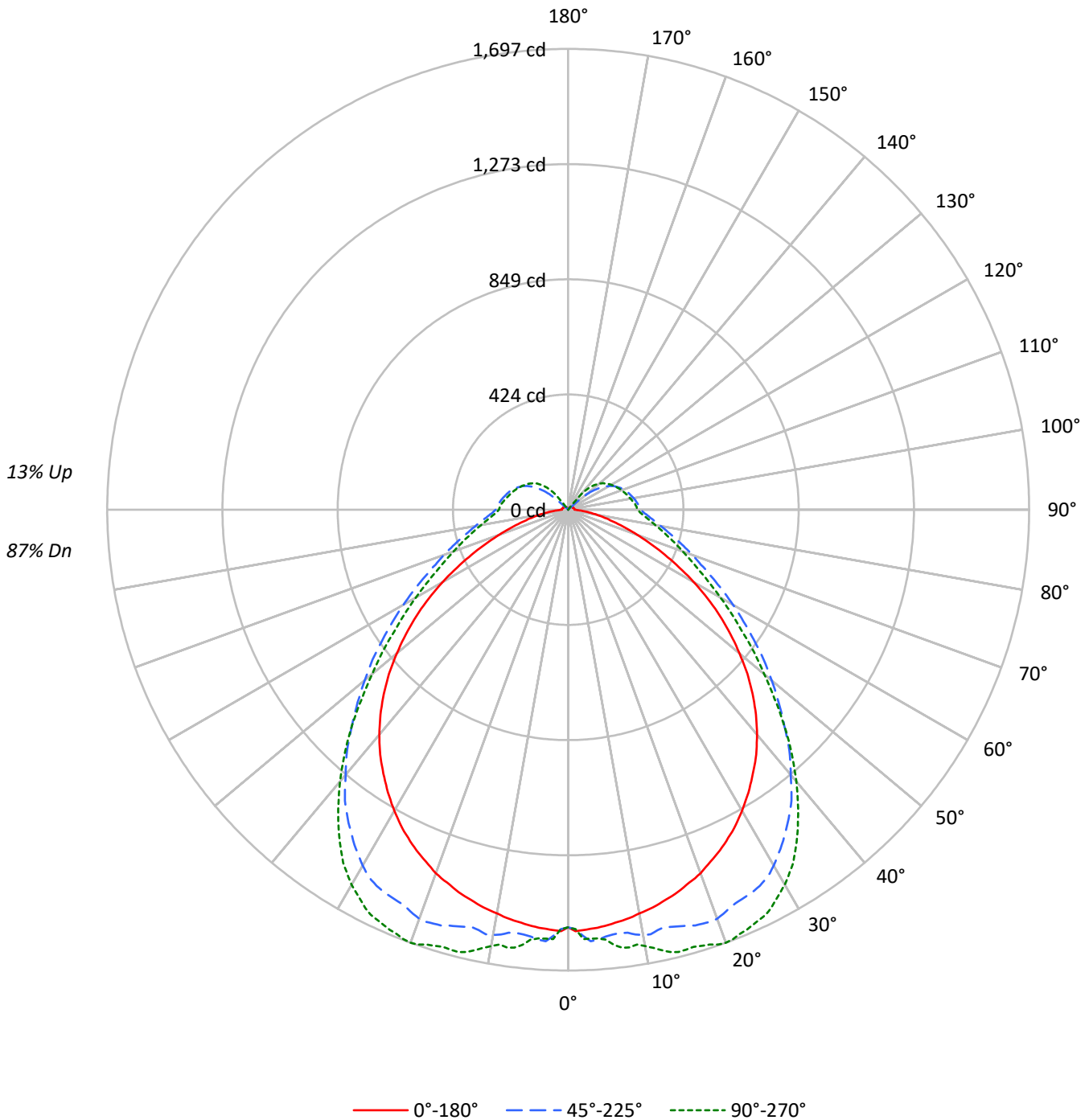
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5582.0 lumens  
Efficiency: N/A  
Efficacy: 147.7 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): 37.8  
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°	273436	273436	273436
5°	272818	128981	106409
10°	268887	84853	67602
15°	265715	63224	50574
20°	262273	51209	40475
25°	257435	42060	33070
30°	251746	35263	27294
35°	244372	29214	22247
40°	235892	23953	17851
45°	224160	19488	14117
50°	208648	15800	10997
55°	190637	12718	8589
60°	167791	10208	6764
65°	141880	8146	5379
70°	115878	6608	4373
75°	92422	5446	3625
80°	75936	4569	3061
85°	58370	3922	2637



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	150.4	2.7
10°-20°	447.8	8.0
20°-30°	707.9	12.7
30°-40°	854.2	15.3
40°-50°	837.3	15.0
50°-60°	703.5	12.6
60°-70°	527.9	9.5
70°-80°	379.2	6.8
80°-90°	273.9	4.9
90°-100°	226.4	4.1
100°-110°	192.7	3.5
110°-120°	142.3	2.5
120°-130°	94.1	1.7
130°-140°	39.2	0.7
140°-150°	4.2	0.1
150°-160°	1.1	0.0
160°-170°	0.1	0.0
170°-180°	0.0	0.0
0°-30°	1306.1	23.4
0°-40°	2160.3	38.7
0°-60°	3701.1	66.3
0°-90°	4882.0	87.5
90°-120°	561.5	10.1
90°-150°	698.9	12.5
90°-180°	700.0	12.5
0°-180°	5582.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1538	1538	1538	1538	1538	
5°	1539	1566	1578	1581	1590	146
15°	1473	1500	1588	1667	1677	416
25°	1359	1420	1566	1640	1666	626
35°	1186	1277	1409	1466	1470	742
45°	960	1036	1126	1138	1126	739
55°	682	768	833	803	782	608
65°	392	525	581	547	535	391
75°	173	352	408	386	380	189
85°	54	243	299	283	283	55
90°	23	207	267	255	255	14
95°	22	196	257	245	246	18
105°	22	156	232	220	221	22
115°	19	67	198	199	196	19
125°	16	22	139	169	169	15
135°	14	15	10	107	121	11
145°	10	9	5	0	0	6
155°	5	4	2	0	0	3
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°	1537.9	1537.9	1537.9	1537.9	1537.9
1°	1552.6	1536.2	1544.8	1548.3	1544.8
2°	1549.2	1540.5	1569.9	1587.2	1582.0
3°	1545.7	1550.9	1591.5	1589.8	1582.0
4°	1543.1	1560.4	1587.2	1584.6	1582.0
5°	1538.8	1565.6	1577.7	1581.1	1589.8
6°	1533.6	1563.0	1573.4	1593.2	1611.4
7°	1528.4	1555.2	1569.9	1610.5	1625.2
8°	1523.2	1547.4	1573.4	1620.9	1627.8
9°	1517.2	1540.5	1583.7	1618.3	1620.9
10°	1509.4	1534.5	1590.7	1612.3	1632.1
11°	1504.2	1525.8	1592.4	1620.9	1644.3
12°	1497.3	1515.4	1582.9	1633.0	1658.1
13°	1489.5	1507.7	1577.7	1647.7	1671.9
14°	1480.9	1501.6	1582.9	1658.9	1678.8
15°	1473.1	1499.9	1588.1	1666.7	1677.1
16°	1464.4	1499.0	1593.2	1665.0	1674.5
17°	1454.1	1497.3	1601.0	1658.1	1679.7
18°	1443.7	1494.7	1602.8	1658.1	1684.0
19°	1435.0	1490.4	1605.3	1661.5	1693.5
20°	1424.7	1480.9	1602.8	1665.0	1697.0
21°	1410.8	1468.8	1594.1	1668.5	1694.4
22°	1397.9	1454.9	1582.9	1665.9	1684.9
23°	1385.8	1440.2	1575.1	1658.9	1680.6
24°	1372.8	1429.9	1570.8	1647.7	1672.8
25°	1359.0	1420.3	1566.4	1639.9	1665.9
26°	1344.3	1410.8	1561.3	1632.1	1659.8
27°	1330.4	1401.3	1554.3	1622.6	1646.0
28°	1314.0	1389.2	1544.0	1613.1	1627.8
29°	1296.7	1376.3	1531.0	1599.3	1610.5
30°	1280.3	1363.3	1512.8	1578.5	1595.0
32.5°	1234.5	1324.4	1463.6	1528.4	1541.4
35°	1186.1	1276.8	1409.1	1466.2	1469.6
37.5°	1136.8	1224.1	1350.3	1391.0	1391.0
40°	1081.5	1161.0	1274.3	1310.6	1306.2
42.5°	1022.7	1100.5	1206.0	1227.6	1218.1
45°	959.6	1035.7	1125.6	1138.5	1125.6
47.5°	894.7	969.1	1051.2	1052.1	1030.5
50°	823.0	902.5	977.7	963.9	942.3
52.5°	753.0	836.0	907.7	880.0	862.8
55°	682.1	768.5	833.4	803.1	781.5
57.5°	608.6	702.0	765.1	732.2	713.2
60°	534.3	639.7	701.1	663.9	646.6
62.5°	460.8	578.3	638.0	602.5	587.8
65°	392.5	524.7	580.9	547.2	535.1



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
67.5°	328.5	472.9	529.1	498.8	488.4
70°	269.7	427.9	485.0	456.4	448.7
72.5°	219.6	387.3	445.2	419.3	413.2
75°	172.9	351.8	408.0	385.6	380.4
77.5°	138.3	320.7	375.2	355.3	351.8
80°	106.3	292.2	346.7	328.5	325.9
82.5°	77.8	266.3	320.7	303.4	302.6
85°	53.6	242.9	299.1	282.7	282.7
87.5°	34.6	223.9	280.1	264.5	266.3
90°	23.3	206.6	267.1	255.0	255.0
92.5°	23.3	203.2	262.8	250.7	251.6
95°	22.5	196.2	256.8	244.6	246.4
97.5°	22.5	188.5	250.7	237.7	239.5
100°	21.6	178.9	244.6	231.7	233.4
102.5°	21.6	168.6	237.7	226.5	226.5
105°	21.6	156.5	231.7	220.4	221.3
107.5°	20.7	142.6	225.6	215.3	215.3
110°	19.9	123.6	218.7	210.1	209.2
112.5°	19.9	99.4	209.2	204.9	203.2
115°	19.0	67.4	198.0	198.8	196.2
117.5°	18.2	29.4	188.5	192.8	190.2
120°	17.3	26.8	174.6	186.7	183.3
122.5°	17.3	24.2	158.2	178.9	176.4
125°	16.4	21.6	139.2	169.4	168.6
127.5°	16.4	19.9	115.0	158.2	159.9
130°	15.6	18.2	84.7	145.2	149.6
132.5°	14.7	16.4	17.3	128.8	136.6
135°	13.8	14.7	9.5	107.2	121.0
137.5°	13.0	13.0	8.6	80.4	100.3
140°	12.1	11.2	6.9	12.1	74.3
142.5°	10.4	10.4	6.1	0.9	2.6
145°	9.5	8.6	5.2	0.0	0.0
147.5°	8.6	7.8	4.3	0.0	0.0
150°	7.8	6.9	3.5	0.0	0.0
152.5°	6.9	5.2	2.6	0.0	0.0
155°	5.2	4.3	1.7	0.0	0.0
157.5°	4.3	3.5	0.9	0.0	0.0
160°	3.5	2.6	0.9	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)