

Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735917

Luminaire Tested: S122RDR-S485D835-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735917  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2308-143-2)  
Test Lab: INNOVATION CENTER  
Issue Date: 1/24/2024  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-S485D835-X4F0-XX-UDD-W-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2057.7 lumens  
Efficiency: N/A  
Efficacy: 105.0 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1  
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')  
CIE Type: Direct

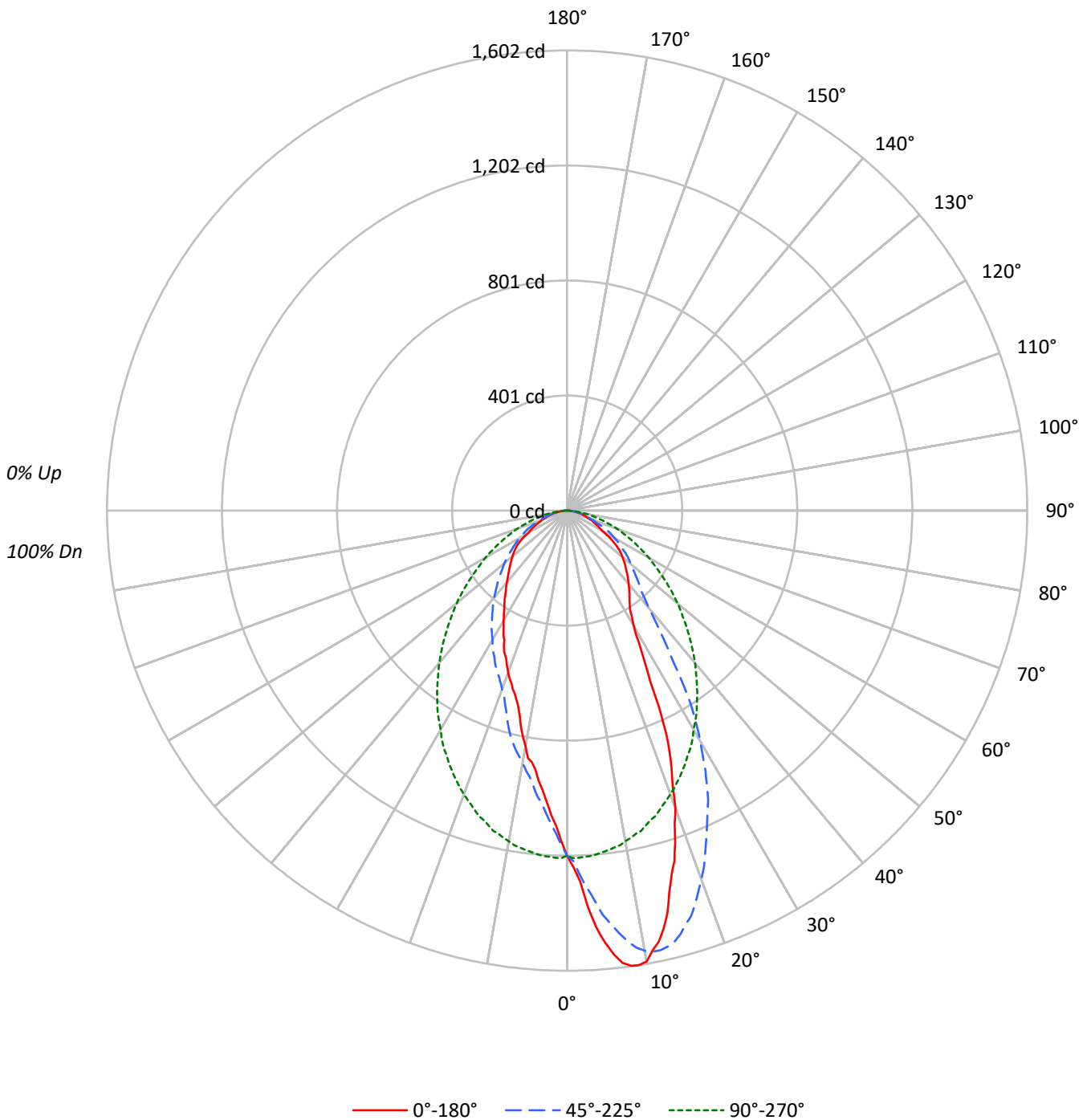
Input Watts (W): 19.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P735917

CATALOG NUMBER: S122RDR-S485D835-X4F0-XX-UDD-W-W

### Luminous Intensity Polar Plot



TEST NUMBER: P735917

CATALOG NUMBER: S122RDR-S485D835-X4F0-XX-UDD-W-W

**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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				32

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

	0°	45°	90°	135°	180°
0°	23083	23083	23083	23083	23083
5°	29121	27240	23171	19688	18851
10°	31106	30374	22818	17422	16280
15°	27360	30364	22216	15621	13565
20°	22556	27947	21506	13560	12275
25°	16080	24536	20644	12557	11043
30°	10290	20579	19538	11524	9808
35°	8863	15165	18521	10693	8896
40°	8353	11088	17376	9894	8172
45°	7891	9500	16155	9166	7715
50°	7515	8660	15008	8528	7428
55°	6897	8009	13720	7842	7165
60°	5440	7300	12601	7358	6051
65°	4926	6536	11429	6831	5517
70°	4547	5277	10391	5884	5075
75°	4233	4775	9060	5258	4775
80°	3918	4317	7671	4715	4317
85°	3507	3815	5888	4146	3815

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 22614 cd/sqm



TEST NUMBER: P735917

CATALOG NUMBER: S122RDR-S485D835-X4F0-XX-UDD-W-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.5	5.7
10°-20°	313.0	15.2
20°-30°	392.6	19.1
30°-40°	374.0	18.2
40°-50°	330.0	16.0
50°-60°	259.6	12.6
60°-70°	165.6	8.0
70°-80°	84.2	4.1
80°-90°	22.3	1.1
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°	822.0	39.9
0°-40°	1196.0	58.1
0°-60°	1785.6	86.8
0°-90°	2057.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2057.7	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1201	1201	1201	1201	1201	
5°	1509	1412	1201	1020	977	147
15°	1375	1526	1116	785	682	381
25°	758	1157	973	592	521	342
35°	378	646	789	456	379	240
45°	290	350	594	337	284	225
55°	206	239	409	234	214	181
65°	108	144	251	150	121	108
75°	57	64	122	71	64	61
85°	16	17	27	19	17	18
90°	0	0	0	0	0	



TEST NUMBER: P735917

CATALOG NUMBER: S122RDR-S485D835-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1200.9	1200.9	1200.9	1200.9	1200.9	1200.9	1200.9	1200.9	1200.9
1°	1241.3	1247.1	1220.4	1223.3	1210.3	1187.2	1164.8	1167.0	1151.1
2°	1291.2	1306.3	1269.5	1247.1	1209.6	1169.1	1124.4	1118.6	1099.1
3°	1381.4	1374.2	1313.6	1268.1	1206.7	1146.0	1089.7	1076.7	1060.1
4°	1454.4	1432.7	1358.3	1294.8	1205.2	1119.3	1055.8	1033.4	1016.8
5°	1509.3	1481.8	1411.8	1315.0	1200.9	1104.1	1020.4	995.1	977.0
6°	1553.3	1532.4	1446.4	1333.8	1195.1	1081.8	999.4	965.5	946.7
7°	1587.2	1569.9	1481.8	1359.1	1190.1	1059.4	966.2	930.8	908.4
8°	1600.2	1592.3	1514.3	1377.1	1184.3	1043.5	936.6	904.8	884.6
9°	1602.4	1603.1	1540.3	1394.4	1179.2	1014.6	915.7	883.2	872.3
10°	1593.7	1600.2	1556.2	1413.9	1169.1	1000.2	892.6	861.5	834.1
11°	1559.8	1588.7	1564.1	1426.9	1160.5	977.0	872.3	831.9	804.5
12°	1534.5	1562.0	1564.9	1443.5	1150.4	966.2	855.0	800.8	772.0
13°	1492.6	1521.5	1557.6	1447.9	1144.6	939.5	833.3	769.1	733.7
14°	1442.8	1489.0	1546.1	1457.3	1130.1	916.4	811.7	724.3	703.4
15°	1374.9	1440.7	1525.9	1460.9	1116.4	900.5	785.0	701.9	681.7
16°	1318.6	1393.0	1498.4	1460.9	1107.8	878.8	756.1	682.4	662.2
17°	1276.0	1336.7	1476.0	1461.6	1093.3	863.7	727.2	664.4	648.5
18°	1216.1	1284.0	1440.7	1458.7	1078.1	845.6	702.6	649.2	629.7
19°	1149.6	1230.5	1403.1	1453.7	1065.1	826.8	676.6	633.3	616.7
20°	1102.7	1177.1	1366.3	1445.7	1051.4	814.6	662.9	615.3	600.1
21°	1024.0	1115.0	1329.4	1434.9	1037.0	793.6	644.1	599.4	582.8
22.5°	943.8	1027.6	1261.6	1416.8	1013.2	767.6	623.2	579.9	555.3
23°	912.8	1006.7	1240.6	1411.8	1005.2	761.1	616.7	571.2	549.5
24°	846.3	943.8	1197.3	1395.9	987.9	739.5	604.4	553.9	538.7
25°	758.2	890.4	1156.9	1379.3	973.4	723.6	592.1	540.2	520.7
26°	658.6	817.5	1120.0	1359.1	953.2	701.9	575.5	527.2	499.7
27°	597.2	754.6	1070.2	1337.4	938.8	686.0	561.8	507.7	488.2
28°	548.1	655.7	1025.4	1316.4	921.4	666.5	552.4	493.9	470.8
29°	494.7	601.5	972.7	1288.3	902.7	644.1	537.3	480.2	455.7
30°	463.6	543.8	927.2	1267.3	880.3	629.0	519.2	466.5	441.9
32.5°	407.3	448.4	803.7	1207.4	837.7	585.7	489.6	428.9	408.0
35°	377.7	399.3	646.3	1137.4	789.3	549.5	455.7	397.9	379.1
37.5°	355.3	368.3	533.7	1062.3	740.2	517.8	424.6	369.0	351.0
40°	332.9	343.0	441.9	990.0	692.5	486.7	394.3	339.4	325.7
42.5°	312.7	320.6	383.5	918.6	643.4	454.9	364.7	316.3	304.0
45°	290.3	297.5	349.5	831.9	594.3	422.4	337.2	291.0	283.8
47.5°	271.5	276.6	317.0	754.6	545.9	391.4	309.1	270.8	265.7
50°	251.3	257.8	289.6	668.7	501.9	361.1	285.2	252.7	248.4
52.5°	231.8	234.7	266.5	582.8	455.7	331.5	260.0	234.7	231.8
55°	205.8	217.4	239.0	494.7	409.4	304.0	234.0	215.9	213.8
57.5°	176.2	191.4	214.5	415.2	366.1	273.7	213.0	198.6	189.2
60°	141.5	159.6	189.9	345.2	327.8	246.2	191.4	169.0	157.4
62.5°	124.2	130.0	167.5	288.9	288.9	220.3	169.7	145.1	140.1
65°	108.3	112.7	143.7	239.0	251.3	191.4	150.2	125.7	121.3



TEST NUMBER: P735917

CATALOG NUMBER: S122RDR-S485D835-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	94.6	98.2	109.8	199.3	216.6	166.8	124.2	109.8	104.7
70°	80.9	83.8	93.9	162.5	184.9	142.3	104.7	93.9	90.3
72.5°	68.6	71.5	77.3	122.0	151.6	118.4	88.1	80.2	77.3
75°	57.0	58.5	64.3	91.0	122.0	94.6	70.8	65.7	64.3
77.5°	46.2	46.9	50.5	65.0	94.6	72.2	57.0	52.7	52.0
80°	35.4	36.1	39.0	46.9	69.3	52.0	42.6	40.4	39.0
82.5°	25.3	26.0	27.4	31.8	46.9	35.4	30.3	29.6	27.4
85°	15.9	15.9	17.3	19.5	26.7	20.2	18.8	18.1	17.3
87.5°	7.2	7.2	7.9	7.9	12.3	8.7	8.7	7.9	7.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)