

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: P735920

Luminaire Tested: S122RDR-S485D927-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2019  
Report Number: P735920  
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-S485D927-X4F0-XX-UDD-W-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1630.1 lumens  
Efficiency: N/A  
Efficacy: 83.2 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

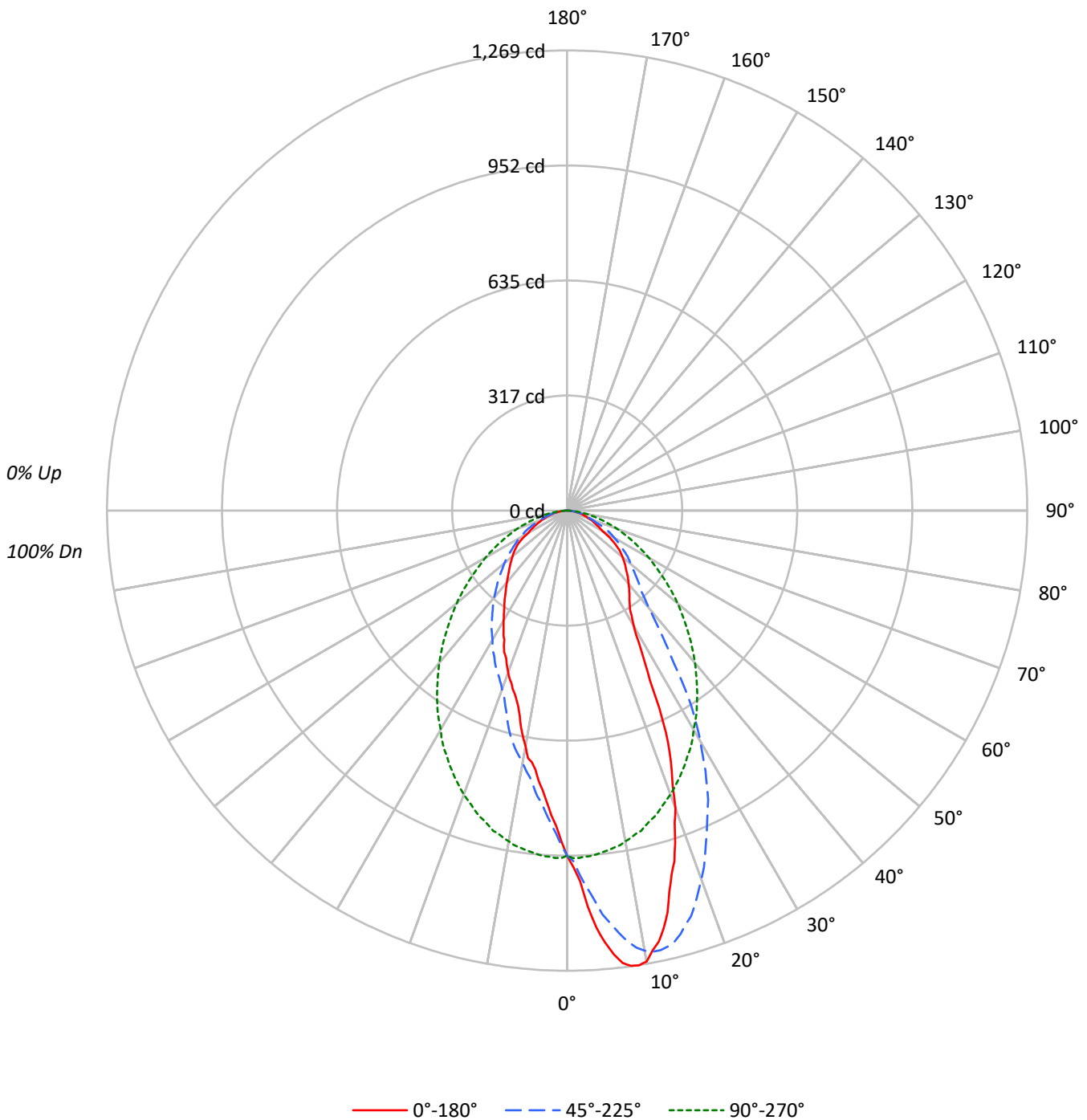
Input Watts (W): 19.6  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



TEST NUMBER: P735920

CATALOG NUMBER: S122RDR-S485D927-X4F0-XX-UDD-W-W

### Luminous Intensity Polar Plot



TEST NUMBER: P735920

CATALOG NUMBER: S122RDR-S485D927-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				
1	110	106	103	99	108	104	101	98	100	97	95	96	94	92	92	91	89	87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				
4	87	77	69	63	85	75	68	62	73	67	62	71	65	61	69	64	60	58				
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				
7	71	58	50	45	69	57	50	45	56	49	44	55	49	44	53	48	44	42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				
9	62	50	42	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				
10	59	46	39	34	57	46	39	34	45	39	34	44	38	34	43	38	34	32				

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

	0°	45°	90°	135°	180°
0°	18285	18285	18285	18285	18285
5°	23069	21579	18355	15596	14934
10°	24641	24062	18077	13801	12895
15°	21674	24054	17599	12373	10746
20°	17867	22138	17037	10743	9724
25°	12740	19435	16354	9949	8748
30°	8152	16302	15476	9129	7770
35°	7021	12014	14673	8471	7046
40°	6617	8785	13765	7836	6474
45°	6252	7527	12798	7263	6111
50°	5954	6860	11889	6758	5885
55°	5462	6347	10871	6210	5673
60°	4309	5786	9984	5828	4794
65°	3902	5176	9055	5412	4371
70°	3602	4181	8228	4659	4018
75°	3357	3780	7181	4166	3780
80°	3099	3420	6077	3741	3420
85°	2779	3021	4675	3286	3021

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 17914 cd/sqm



TEST NUMBER: P735920

CATALOG NUMBER: S122RDR-S485D927-X4F0-XX-UDD-W-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.3	5.7
10°-20°	247.9	15.2
20°-30°	311.0	19.1
30°-40°	296.3	18.2
40°-50°	261.4	16.0
50°-60°	205.6	12.6
60°-70°	131.2	8.0
70°-80°	66.7	4.1
80°-90°	17.7	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°	651.2	39.9
0°-40°	947.5	58.1
0°-60°	1414.5	86.8
0°-90°	1630.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1630.1	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	951	951	951	951	951	
5°	1196	1118	951	808	774	116
15°	1089	1209	884	622	540	302
25°	601	916	771	469	412	271
35°	299	512	625	361	300	190
45°	230	277	471	267	225	178
55°	163	189	324	185	169	143
65°	86	114	199	119	96	86
75°	45	51	97	56	51	48
85°	13	14	21	15	14	14
90°	0	0	0	0	0	



TEST NUMBER: P735920

CATALOG NUMBER: S122RDR-S485D927-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	951.3	951.3	951.3	951.3	951.3	951.3	951.3	951.3	951.3
1°	983.4	987.9	966.8	969.1	958.8	940.5	922.7	924.4	911.9
2°	1022.8	1034.9	1005.7	987.9	958.2	926.2	890.7	886.1	870.7
3°	1094.4	1088.6	1040.6	1004.5	955.9	907.9	863.2	852.9	839.8
4°	1152.1	1135.0	1076.0	1025.7	954.8	886.7	836.4	818.6	805.5
5°	1195.6	1173.9	1118.4	1041.7	951.3	874.7	808.3	788.3	774.0
6°	1230.5	1213.9	1145.8	1056.6	946.8	856.9	791.7	764.8	750.0
7°	1257.4	1243.7	1173.9	1076.6	942.8	839.2	765.4	737.4	719.7
8°	1267.7	1261.4	1199.6	1090.9	938.2	826.6	742.0	716.8	700.8
9°	1269.4	1270.0	1220.2	1104.6	934.2	803.7	725.4	699.6	691.0
10°	1262.5	1267.7	1232.8	1120.1	926.2	792.3	707.1	682.5	660.7
11°	1235.7	1258.5	1239.1	1130.4	919.3	774.0	691.0	659.0	637.3
12°	1215.6	1237.4	1239.7	1143.5	911.3	765.4	677.3	634.4	611.5
13°	1182.4	1205.3	1233.9	1147.0	906.7	744.3	660.2	609.2	581.2
14°	1143.0	1179.6	1224.8	1154.4	895.3	725.9	643.0	573.8	557.2
15°	1089.2	1141.3	1208.8	1157.3	884.4	713.4	621.8	556.0	540.0
16°	1044.6	1103.5	1187.0	1157.3	877.5	696.2	598.9	540.6	524.6
17°	1010.8	1058.9	1169.3	1157.9	866.1	684.2	576.1	526.3	513.7
18°	963.3	1017.1	1141.3	1155.6	854.1	669.9	556.6	514.3	498.8
19°	910.7	974.8	1111.5	1151.6	843.8	655.0	536.0	501.7	488.5
20°	873.5	932.5	1082.3	1145.3	832.9	645.3	525.2	487.4	475.4
21°	811.2	883.3	1053.2	1136.7	821.5	628.7	510.3	474.8	461.7
22.5°	747.7	814.0	999.4	1122.4	802.6	608.1	493.7	459.4	439.9
23°	723.1	797.5	982.8	1118.4	796.3	603.0	488.5	452.5	435.3
24°	670.5	747.7	948.5	1105.8	782.6	585.8	478.8	438.8	426.8
25°	600.7	705.4	916.4	1092.6	771.1	573.2	469.1	427.9	412.5
26°	521.7	647.6	887.3	1076.6	755.1	556.0	455.9	417.6	395.9
27°	473.1	597.8	847.8	1059.5	743.7	543.5	445.1	402.2	386.7
28°	434.2	519.4	812.3	1042.9	729.9	528.0	437.6	391.3	373.0
29°	391.9	476.5	770.6	1020.6	715.1	510.3	425.6	380.4	361.0
30°	367.3	430.8	734.5	1004.0	697.3	498.3	411.3	369.6	350.1
32.5°	322.6	355.2	636.7	956.5	663.6	463.9	387.9	339.8	323.2
35°	299.2	316.3	512.0	901.0	625.3	435.3	361.0	315.2	300.3
37.5°	281.5	291.8	422.8	841.5	586.4	410.2	336.4	292.3	278.0
40°	263.7	271.7	350.1	784.3	548.6	385.6	312.3	268.9	258.0
42.5°	247.7	254.0	303.8	727.7	509.7	360.4	288.9	250.6	240.8
45°	230.0	235.7	276.9	659.0	470.8	334.7	267.2	230.5	224.8
47.5°	215.1	219.1	251.1	597.8	432.5	310.1	244.8	214.5	210.5
50°	199.1	204.2	229.4	529.7	397.6	286.0	226.0	200.2	196.8
52.5°	183.6	185.9	211.1	461.7	361.0	262.6	205.9	185.9	183.6
55°	163.0	172.2	189.4	391.9	324.4	240.8	185.3	171.0	169.3
57.5°	139.6	151.6	169.9	328.9	290.0	216.8	168.8	157.3	149.9
60°	112.1	126.4	150.5	273.4	259.7	195.1	151.6	133.9	124.7
62.5°	98.4	103.0	132.7	228.8	228.8	174.5	134.4	115.0	111.0
65°	85.8	89.2	113.8	189.4	199.1	151.6	119.0	99.5	96.1



TEST NUMBER: P735920

CATALOG NUMBER: S122RDR-S485D927-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	74.9	77.8	87.0	157.9	171.6	132.1	98.4	87.0	82.9
70°	64.1	66.4	74.4	128.7	146.4	112.7	82.9	74.4	71.5
72.5°	54.3	56.6	61.2	96.7	120.1	93.8	69.8	63.5	61.2
75°	45.2	46.3	50.9	72.1	96.7	74.9	56.1	52.1	50.9
77.5°	36.6	37.2	40.0	51.5	74.9	57.2	45.2	41.8	41.2
80°	28.0	28.6	30.9	37.2	54.9	41.2	33.8	32.0	30.9
82.5°	20.0	20.6	21.7	25.2	37.2	28.0	24.0	23.5	21.7
85°	12.6	12.6	13.7	15.4	21.2	16.0	14.9	14.3	13.7
87.5°	5.7	5.7	6.3	6.3	9.7	6.9	6.9	6.3	5.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)