

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P735923

Luminaire Tested: S122RDRP-S485D940-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

**Test Information**

Test Method: LM-79-2024  
Report Number: P735923  
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: S122RDRP-S485D940-X4F0-XX-UDD-W-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

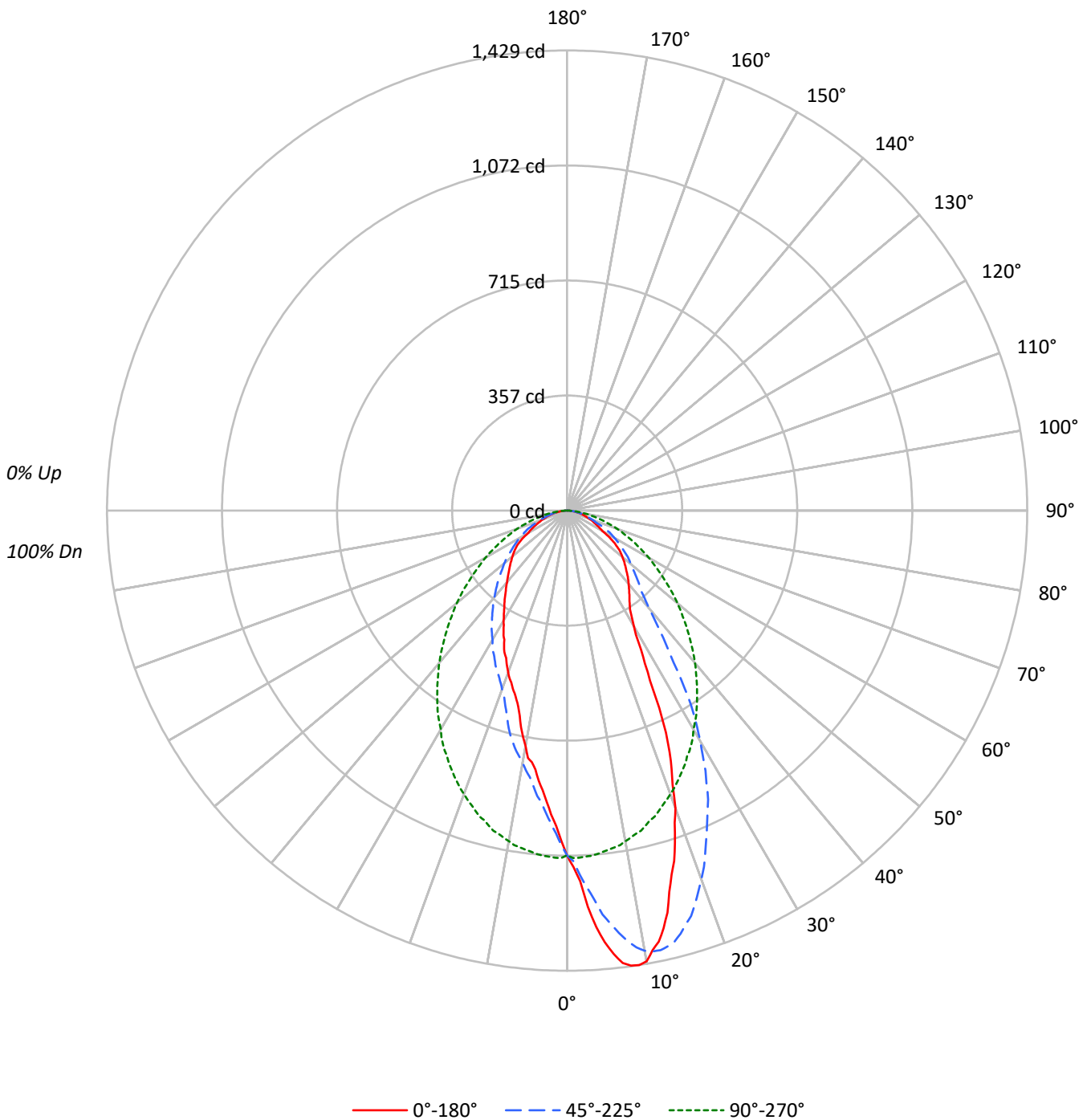
Lumens per Lamp: N/A  
Luminaire Lumens: 1834.9 lumens  
Efficiency: N/A  
Efficacy: 93.6 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1  
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')  
CIE Type: Direct

Input Watts (W): 19.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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: P735923

CATALOG NUMBER: S122RDRP-S485D940-X4F0-XX-UDD-W-W

### Luminous Intensity Polar Plot



TEST NUMBER: P735923

CATALOG NUMBER: S122RDRP-S485D940-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	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				
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°	20584	20584	20584	20584	20584
5°	25967	24290	20663	17556	16810
10°	27739	27085	20347	15534	14515
15°	24397	27075	19810	13930	12097
20°	20113	24920	19178	12091	10945
25°	14339	21879	18409	11198	9847
30°	9175	18351	17423	10276	8747
35°	7903	13523	16515	9534	7933
40°	7450	9889	15494	8822	7287
45°	7038	8473	14407	8174	6880
50°	6701	7721	13382	7607	6624
55°	6149	7141	12235	6990	6387
60°	4851	6512	11237	6558	5397
65°	4394	5826	10192	6090	4921
70°	4052	4704	9262	5249	4524
75°	3780	4255	8080	4686	4255
80°	3498	3852	6841	4206	3852
85°	3132	3418	5249	3683	3418

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 20164 cd/sqm



TEST NUMBER: P735923

CATALOG NUMBER: S122RDRP-S485D940-X4F0-XX-UDD-W-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.9	5.7
10°-20°	279.1	15.2
20°-30°	350.1	19.1
30°-40°	333.5	18.2
40°-50°	294.2	16.0
50°-60°	231.5	12.6
60°-70°	147.7	8.0
70°-80°	75.1	4.1
80°-90°	19.9	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°	733.0	39.9
0°-40°	1066.5	58.1
0°-60°	1592.2	86.8
0°-90°	1834.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1834.9	100.0

**CANDELA DISTRIBUTION:**

	0°	45°	90°	135°	180°	Flux
0°	1071	1071	1071	1071	1071	
5°	1346	1259	1071	910	871	131
15°	1226	1361	996	700	608	340
25°	676	1032	868	528	464	305
35°	337	576	704	406	338	214
45°	259	312	530	301	253	201
55°	184	213	365	209	191	161
65°	97	128	224	134	108	97
75°	51	57	109	63	57	54
85°	14	16	24	17	16	16
90°	0	0	0	0	0	



TEST NUMBER: P735923

CATALOG NUMBER: S122RDRP-S485D940-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1070.9	1070.9	1070.9	1070.9	1070.9	1070.9	1070.9	1070.9	1070.9
1°	1106.9	1112.1	1088.2	1090.8	1079.2	1058.6	1038.7	1040.6	1026.4
2°	1151.4	1164.9	1132.0	1112.1	1078.6	1042.5	1002.6	997.5	980.1
3°	1231.8	1225.4	1171.3	1130.7	1076.0	1021.9	971.7	960.1	945.3
4°	1296.9	1277.6	1211.2	1154.6	1074.7	998.1	941.4	921.5	906.7
5°	1345.8	1321.4	1258.9	1172.6	1070.9	984.6	909.9	887.3	871.2
6°	1385.1	1366.4	1289.8	1189.3	1065.7	964.6	891.2	860.9	844.2
7°	1415.4	1399.9	1321.4	1211.9	1061.2	944.7	861.6	830.0	810.1
8°	1427.0	1419.9	1350.3	1228.0	1056.1	930.5	835.2	806.8	788.8
9°	1428.9	1429.5	1373.5	1243.4	1051.5	904.7	816.5	787.5	777.9
10°	1421.2	1427.0	1387.7	1260.8	1042.5	891.8	795.9	768.2	743.7
11°	1390.9	1416.7	1394.8	1272.4	1034.8	871.2	777.9	741.8	717.3
12°	1368.4	1392.8	1395.4	1287.2	1025.8	861.6	762.4	714.1	688.4
13°	1331.0	1356.8	1389.0	1291.1	1020.6	837.8	743.1	685.8	654.2
14°	1286.6	1327.8	1378.7	1299.5	1007.8	817.2	723.8	645.9	627.2
15°	1226.0	1284.6	1360.6	1302.7	995.5	803.0	700.0	625.9	607.9
16°	1175.8	1242.1	1336.2	1302.7	987.8	783.7	674.2	608.5	590.5
17°	1137.8	1191.9	1316.2	1303.3	974.9	770.1	648.4	592.4	578.3
18°	1084.4	1144.9	1284.6	1300.7	961.4	754.0	626.5	578.9	561.5
19°	1025.1	1097.3	1251.2	1296.2	949.8	737.3	603.4	564.7	549.9
20°	983.3	1049.6	1218.3	1289.2	937.6	726.4	591.1	548.6	535.1
21°	913.1	994.2	1185.5	1279.5	924.7	707.7	574.4	534.5	519.7
22.5°	841.6	916.3	1125.0	1263.4	903.4	684.5	555.7	517.1	495.2
23°	813.9	897.6	1106.3	1258.9	896.4	678.7	549.9	509.4	490.0
24°	754.7	841.6	1067.6	1244.7	880.9	659.4	539.0	493.9	480.4
25°	676.1	794.0	1031.6	1229.9	868.0	645.2	528.0	481.7	464.3
26°	587.3	728.9	998.7	1211.9	850.0	625.9	513.2	470.1	445.6
27°	532.5	672.9	954.3	1192.6	837.1	611.7	501.0	452.7	435.3
28°	488.7	584.7	914.4	1173.9	821.7	594.4	492.6	440.5	419.8
29°	441.1	536.4	867.4	1148.8	804.9	574.4	479.1	428.2	406.3
30°	413.4	484.9	826.8	1130.1	785.0	560.9	463.0	416.0	394.1
32.5°	363.2	399.9	716.7	1076.7	747.0	522.2	436.6	382.5	363.8
35°	336.8	356.1	576.3	1014.2	703.8	490.0	406.3	354.8	338.1
37.5°	316.8	328.4	475.9	947.2	660.0	461.7	378.6	329.1	313.0
40°	296.9	305.9	394.1	882.8	617.5	434.0	351.6	302.6	290.4
42.5°	278.8	285.9	341.9	819.1	573.7	405.7	325.2	282.0	271.1
45°	258.9	265.3	311.7	741.8	530.0	376.7	300.7	259.5	253.1
47.5°	242.1	246.6	282.7	672.9	486.8	349.0	275.6	241.5	237.0
50°	224.1	229.9	258.2	596.3	447.5	322.0	254.4	225.4	221.5
52.5°	206.7	209.3	237.6	519.7	406.3	295.6	231.8	209.3	206.7
55°	183.5	193.8	213.1	441.1	365.1	271.1	208.6	192.5	190.6
57.5°	157.1	170.6	191.2	370.3	326.5	244.1	190.0	177.1	168.7
60°	126.2	142.3	169.4	307.8	292.3	219.6	170.6	150.7	140.4
62.5°	110.8	115.9	149.4	257.6	257.6	196.4	151.3	129.4	124.9
65°	96.6	100.5	128.1	213.1	224.1	170.6	133.9	112.0	108.2



TEST NUMBER: P735923

CATALOG NUMBER: S122RDRP-S485D940-X4F0-XX-UDD-W-W

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	84.4	87.6	97.9	177.7	193.2	148.7	110.8	97.9	93.4
70°	72.1	74.7	83.7	144.9	164.8	126.9	93.4	83.7	80.5
72.5°	61.2	63.7	68.9	108.8	135.2	105.6	78.6	71.5	68.9
75°	50.9	52.2	57.3	81.1	108.8	84.4	63.1	58.6	57.3
77.5°	41.2	41.9	45.1	58.0	84.4	64.4	50.9	47.0	46.4
80°	31.6	32.2	34.8	41.9	61.8	46.4	38.0	36.1	34.8
82.5°	22.5	23.2	24.5	28.3	41.9	31.6	27.0	26.4	24.5
85°	14.2	14.2	15.5	17.4	23.8	18.0	16.7	16.1	15.5
87.5°	6.4	6.4	7.1	7.1	10.9	7.7	7.7	7.1	6.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P735923  
 CATALOG NUMBER: S122RDRP-S485D940-X4F0-XX-UDD-W-W

**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	16.94	18.41	17.31	18.72	19.04	19.64	21.11	20.01	21.42	21.74
	3H	18.06	19.37	18.44	19.70	20.06	21.08	22.39	21.46	22.72	23.08
	4H	18.50	19.73	18.90	20.08	20.46	21.58	22.81	21.98	23.16	23.54
	6H	18.85	19.98	19.26	20.35	20.74	21.91	23.04	22.32	23.41	23.80
	8H	18.96	20.04	19.39	20.43	20.83	22.00	23.08	22.43	23.47	23.87
	12H	19.04	20.07	19.47	20.45	20.88	22.05	23.08	22.48	23.46	23.89
4H	2H	18.11	19.34	18.51	19.69	20.07	20.09	21.32	20.49	21.67	22.05
	3H	19.34	20.36	19.75	20.76	21.16	21.75	22.77	22.16	23.17	23.57
	4H	19.82	20.74	20.25	21.15	21.59	22.39	23.30	22.82	23.72	24.16
	6H	20.22	21.02	20.68	21.46	21.92	22.84	23.64	23.30	24.08	24.54
	8H	20.36	21.10	20.82	21.54	22.01	22.97	23.71	23.44	24.16	24.63
	12H	20.46	21.12	20.94	21.60	22.07	23.05	23.71	23.53	24.19	24.67
8H	4H	20.22	20.96	20.69	21.41	21.88	22.50	23.24	22.96	23.69	24.16
	6H	20.71	21.33	21.21	21.82	22.30	23.06	23.67	23.56	24.17	24.65
	8H	20.90	21.45	21.42	21.96	22.45	23.26	23.81	23.78	24.32	24.81
	12H	21.06	21.55	21.57	22.04	22.61	23.41	23.89	23.92	24.39	24.95
12H	4H	20.27	20.93	20.75	21.41	21.88	22.49	23.15	22.97	23.63	24.10
	6H	20.78	21.33	21.30	21.84	22.33	23.06	23.61	23.57	24.12	24.61
	8H	21.02	21.51	21.54	22.00	22.57	23.31	23.79	23.82	24.28	24.85