

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: P735922

Luminaire Tested: S122RDRP-S485D935-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735922
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-S485D935-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

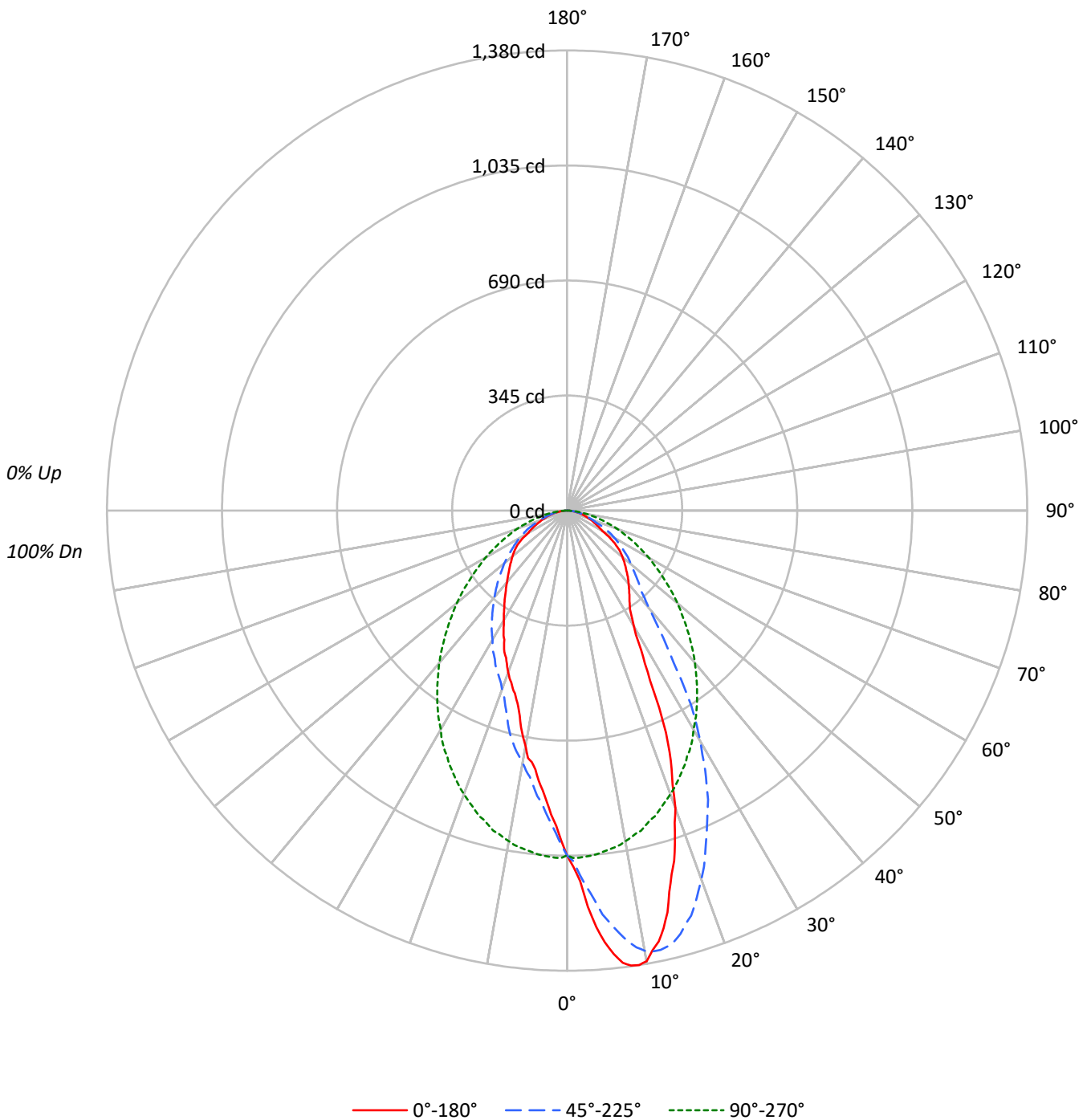
Lumens per Lamp: N/A
Luminaire Lumens: 1771.7 lumens
Efficiency: N/A
Efficacy: 90.4 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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: P735922

CATALOG NUMBER: S122RDRP-S485D935-X4F0-XX-UDD-W-W

Luminous Intensity Polar Plot



TEST NUMBER: P735922

CATALOG NUMBER: S122RDRP-S485D935-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					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°	19875	19875	19875	19875	19875
5°	25073	23453	19951	16950	16231
10°	26782	26152	19647	14999	14016
15°	23557	26144	19127	13448	11679
20°	19420	24063	18518	11676	10569
25°	13845	21126	17775	10812	9508
30°	8860	17718	16821	9921	8445
35°	7631	13058	15947	9205	7659
40°	7191	9547	14962	8519	7036
45°	6793	8179	13910	7894	6641
50°	6471	7455	12921	7344	6396
55°	5938	6897	11813	6749	6166
60°	4686	6285	10852	6335	5209
65°	4243	5626	9842	5881	4753
70°	3911	4541	8947	5069	4367
75°	3646	4107	7805	4523	4107
80°	3376	3719	6608	4062	3719
85°	3021	3286	5072	3573	3286

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 19471 cd/sqm



TEST NUMBER: P735922

CATALOG NUMBER: S122RDRP-S485D935-X4F0-XX-UDD-W-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.3	5.7
10°-20°	269.5	15.2
20°-30°	338.0	19.1
30°-40°	322.0	18.2
40°-50°	284.1	16.0
50°-60°	223.5	12.6
60°-70°	142.6	8.0
70°-80°	72.5	4.1
80°-90°	19.2	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°	707.7	39.9
0°-40°	1029.8	58.1
0°-60°	1537.4	86.8
0°-90°	1771.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1771.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1034	1034	1034	1034	1034	
5°	1300	1216	1034	878	841	126
15°	1184	1314	961	676	587	328
25°	653	996	838	510	448	294
35°	325	556	680	392	326	207
45°	250	301	512	290	244	194
55°	177	206	352	201	184	156
65°	93	124	216	129	104	93
75°	49	55	105	61	55	52
85°	14	15	23	16	15	15
90°	0	0	0	0	0	

TEST NUMBER: P735922

CATALOG NUMBER: S122RDRP-S485D935-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0	1034.0
1°	1068.8	1073.8	1050.8	1053.3	1042.1	1022.2	1002.9	1004.8	991.1
2°	1111.7	1124.8	1093.0	1073.8	1041.4	1006.6	968.1	963.1	946.3
3°	1189.4	1183.2	1131.0	1091.8	1039.0	986.7	938.2	927.0	912.7
4°	1252.2	1233.6	1169.5	1114.8	1037.7	963.7	909.0	889.7	875.4
5°	1299.5	1275.8	1215.5	1132.2	1034.0	950.7	878.5	856.8	841.2
6°	1337.4	1319.4	1245.4	1148.4	1029.0	931.4	860.5	831.3	815.1
7°	1366.6	1351.7	1275.8	1170.1	1024.7	912.1	831.9	801.4	782.2
8°	1377.8	1371.0	1303.8	1185.7	1019.7	898.4	806.4	779.1	761.7
9°	1379.7	1380.3	1326.2	1200.6	1015.3	873.6	788.4	760.4	751.1
10°	1372.2	1377.8	1339.9	1217.4	1006.6	861.1	768.5	741.8	718.1
11°	1343.0	1367.9	1346.7	1228.6	999.2	841.2	751.1	716.3	692.6
12°	1321.2	1344.9	1347.3	1242.9	990.5	831.9	736.2	689.5	664.7
13°	1285.2	1310.0	1341.1	1246.6	985.5	808.9	717.5	662.2	631.7
14°	1242.3	1282.1	1331.2	1254.7	973.0	789.0	698.9	623.6	605.6
15°	1183.8	1240.4	1313.8	1257.8	961.2	775.3	675.8	604.3	586.9
16°	1135.3	1199.4	1290.1	1257.8	953.8	756.7	651.0	587.6	570.1
17°	1098.6	1150.9	1270.9	1258.4	941.3	743.6	626.1	572.0	558.3
18°	1047.0	1105.5	1240.4	1255.9	928.3	728.1	605.0	559.0	542.2
19°	989.8	1059.5	1208.1	1251.6	917.1	711.9	582.6	545.3	531.0
20°	949.4	1013.5	1176.4	1244.8	905.3	701.3	570.8	529.7	516.7
21°	881.6	960.0	1144.7	1235.4	892.8	683.3	554.6	516.1	501.8
22.5°	812.6	884.8	1086.2	1219.9	872.3	660.9	536.6	499.3	478.1
23°	785.9	866.7	1068.2	1215.5	865.5	655.3	531.0	491.8	473.2
24°	728.7	812.6	1030.9	1201.9	850.6	636.7	520.4	476.9	463.8
25°	652.8	766.6	996.1	1187.6	838.1	623.0	509.8	465.1	448.3
26°	567.0	703.8	964.3	1170.1	820.7	604.3	495.5	453.9	430.3
27°	514.2	649.7	921.4	1151.5	808.3	590.7	483.7	437.1	420.3
28°	471.9	564.6	882.9	1133.5	793.4	573.9	475.6	425.3	405.4
29°	425.9	517.9	837.5	1109.2	777.2	554.6	462.6	413.5	392.3
30°	399.2	468.2	798.3	1091.2	757.9	541.5	447.0	401.7	380.5
32.5°	350.7	386.1	692.0	1039.6	721.2	504.2	421.6	369.3	351.3
35°	325.2	343.8	556.5	979.3	679.6	473.2	392.3	342.6	326.4
37.5°	305.9	317.1	459.5	914.6	637.3	445.8	365.6	317.7	302.2
40°	286.6	295.3	380.5	852.4	596.3	419.1	339.5	292.2	280.4
42.5°	269.2	276.1	330.2	790.9	554.0	391.7	314.0	272.3	261.8
45°	249.9	256.2	300.9	716.3	511.7	363.7	290.4	250.6	244.3
47.5°	233.8	238.1	273.0	649.7	470.0	337.0	266.1	233.2	228.8
50°	216.4	222.0	249.3	575.7	432.1	310.9	245.6	217.6	213.9
52.5°	199.6	202.1	229.4	501.8	392.3	285.4	223.8	202.1	199.6
55°	177.2	187.1	205.8	425.9	352.5	261.8	201.4	185.9	184.0
57.5°	151.7	164.8	184.7	357.5	315.2	235.6	183.4	171.0	162.9
60°	121.9	137.4	163.5	297.2	282.3	212.0	164.8	145.5	135.5
62.5°	106.9	111.9	144.2	248.7	248.7	189.6	146.1	125.0	120.6
65°	93.3	97.0	123.7	205.8	216.4	164.8	129.3	108.2	104.5



TEST NUMBER: P735922

CATALOG NUMBER: S122RDRP-S485D935-X4F0-XX-UDD-W-W

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	81.4	84.6	94.5	171.6	186.5	143.6	106.9	94.5	90.2
70°	69.6	72.1	80.8	139.9	159.2	122.5	90.2	80.8	77.7
72.5°	59.1	61.6	66.5	105.1	130.6	102.0	75.9	69.0	66.5
75°	49.1	50.4	55.3	78.3	105.1	81.4	60.9	56.6	55.3
77.5°	39.8	40.4	43.5	56.0	81.4	62.2	49.1	45.4	44.8
80°	30.5	31.1	33.6	40.4	59.7	44.8	36.7	34.8	33.6
82.5°	21.8	22.4	23.6	27.4	40.4	30.5	26.1	25.5	23.6
85°	13.7	13.7	14.9	16.8	23.0	17.4	16.2	15.5	14.9
87.5°	6.2	6.2	6.8	6.8	10.6	7.5	7.5	6.8	6.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P735922
 CATALOG NUMBER: S122RDRP-S485D935-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	16.82	18.29	17.19	18.60	18.92	19.52	20.98	19.88	21.30	21.61
	3H	17.94	19.25	18.32	19.58	19.94	20.96	22.27	21.33	22.60	22.96
	4H	18.38	19.61	18.78	19.96	20.34	21.46	22.69	21.86	23.04	23.42
	6H	18.72	19.86	19.14	20.23	20.62	21.79	22.92	22.20	23.29	23.68
	8H	18.84	19.92	19.27	20.31	20.71	21.88	22.96	22.30	23.35	23.75
	12H	18.91	19.95	19.35	20.33	20.76	21.92	22.96	22.35	23.34	23.77
4H	2H	17.99	19.22	18.39	19.57	19.95	19.97	21.20	20.37	21.55	21.93
	3H	19.22	20.24	19.63	20.64	21.04	21.63	22.65	22.04	23.05	23.45
	4H	19.70	20.61	20.13	21.03	21.47	22.27	23.18	22.70	23.60	24.04
	6H	20.10	20.90	20.56	21.34	21.80	22.72	23.52	23.18	23.96	24.42
	8H	20.23	20.98	20.70	21.42	21.89	22.85	23.59	23.31	24.04	24.51
	12H	20.33	21.00	20.82	21.48	21.95	22.93	23.59	23.41	24.07	24.54
8H	4H	20.10	20.84	20.56	21.29	21.76	22.38	23.12	22.84	23.57	24.03
	6H	20.59	21.20	21.09	21.70	22.17	22.94	23.55	23.44	24.05	24.52
	8H	20.78	21.33	21.30	21.84	22.33	23.14	23.69	23.66	24.20	24.69
	12H	20.94	21.42	21.45	21.92	22.48	23.29	23.77	23.80	24.27	24.83
12H	4H	20.15	20.81	20.63	21.29	21.76	22.37	23.03	22.85	23.51	23.98
	6H	20.66	21.21	21.18	21.72	22.21	22.94	23.49	23.45	24.00	24.49
	8H	20.90	21.39	21.41	21.88	22.45	23.18	23.67	23.69	24.16	24.73