

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: P735924

Luminaire Tested: S122RDRP-S485D950-X4F0-XX-UDD-W-W

Issue Date: 1/24/2024

Test Information

Test Method: LM-79-2024
Report Number: P735924
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-S485D950-X4F0-XX-UDD-W-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH WALL WASH OPTIC
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

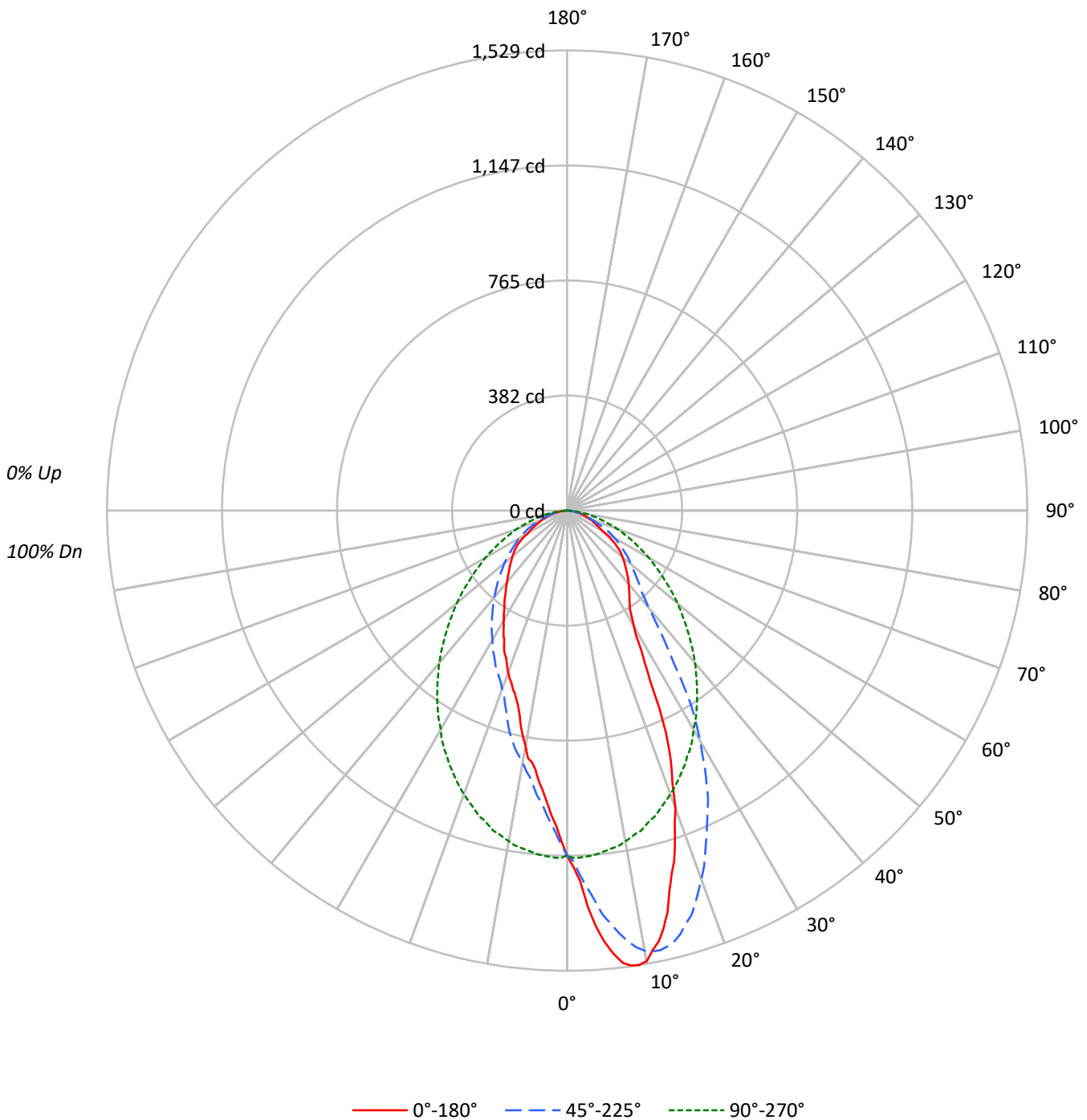
Lumens per Lamp: N/A
Luminaire Lumens: 1963.0 lumens
Efficiency: N/A
Efficacy: 100.2 lumens/watt
Spacing Criteria (0/90/45): 0.82 / 1.11 / 1
Luminous Opening: Rectangular (W 4' x L: 0.14' x H: 0')
CIE Type: Direct

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

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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	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°	22022	22022	22022	22022	22022
5°	27781	25986	22106	18781	17985
10°	29675	28976	21770	16619	15530
15°	26102	28967	21195	14903	12941
20°	21519	26661	20518	12936	11710
25°	15342	23406	19696	11981	10534
30°	9817	19634	18639	10993	9357
35°	8454	14468	17669	10200	8487
40°	7969	10579	16578	9437	7796
45°	7527	9063	15413	8745	7358
50°	7168	8262	14318	8137	7087
55°	6578	7641	13090	7480	6833
60°	5190	6966	12025	7020	5774
65°	4698	6236	10902	6517	5262
70°	4339	5035	9914	5614	4839
75°	4040	4552	8644	5013	4552
80°	3741	4118	7317	4494	4118
85°	3352	3639	5624	3948	3639

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 21572 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	111.1	5.7
10°-20°	298.6	15.2
20°-30°	374.5	19.1
30°-40°	356.8	18.2
40°-50°	314.8	16.0
50°-60°	247.6	12.6
60°-70°	158.0	8.0
70°-80°	80.3	4.1
80°-90°	21.3	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°	784.2	39.9
0°-40°	1141.0	58.1
0°-60°	1703.4	86.8
0°-90°	1963.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1963.0	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1146	1146	1146	1146	1146	
5°	1440	1347	1146	973	932	140
15°	1312	1456	1065	749	650	363
25°	723	1104	929	565	497	326
35°	360	617	753	435	362	229
45°	277	333	567	322	271	215
55°	196	228	391	223	204	172
65°	103	137	240	143	116	103
75°	54	61	116	68	61	58
85°	15	16	26	18	16	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7	1145.7
1°	1184.2	1189.8	1164.3	1167.0	1154.6	1132.6	1111.2	1113.3	1098.1
2°	1231.8	1246.2	1211.1	1189.8	1153.9	1115.4	1072.6	1067.1	1048.5
3°	1317.9	1311.0	1253.1	1209.7	1151.2	1093.3	1039.6	1027.2	1011.3
4°	1387.5	1366.8	1295.8	1235.2	1149.8	1067.8	1007.2	985.8	970.0
5°	1439.8	1413.7	1346.8	1254.5	1145.7	1053.4	973.4	949.3	932.1
6°	1481.9	1461.9	1379.9	1272.4	1140.2	1032.0	953.5	921.1	903.2
7°	1514.2	1497.7	1413.7	1296.5	1135.3	1010.6	921.8	888.0	866.7
8°	1526.6	1519.1	1444.7	1313.8	1129.8	995.5	893.5	863.2	843.9
9°	1528.7	1529.4	1469.5	1330.3	1125.0	967.9	873.5	842.5	832.2
10°	1520.4	1526.6	1484.6	1348.9	1115.4	954.1	851.5	821.9	795.7
11°	1488.1	1515.6	1492.2	1361.3	1107.1	932.1	832.2	793.6	767.5
12°	1463.9	1490.1	1492.9	1377.1	1097.4	921.8	815.7	764.0	736.5
13°	1424.0	1451.5	1486.0	1381.3	1091.9	896.3	795.0	733.7	699.9
14°	1376.5	1420.5	1475.0	1390.2	1078.2	874.2	774.3	691.0	671.0
15°	1311.7	1374.4	1455.7	1393.7	1065.1	859.1	748.9	669.6	650.3
16°	1258.0	1328.9	1429.5	1393.7	1056.8	838.4	721.3	651.0	631.7
17°	1217.3	1275.2	1408.1	1394.4	1043.0	823.9	693.7	633.8	618.6
18°	1160.1	1224.9	1374.4	1391.6	1028.6	806.7	670.3	619.3	600.7
19°	1096.8	1173.9	1338.6	1386.8	1016.1	788.8	645.5	604.2	588.3
20°	1052.0	1122.9	1303.4	1379.2	1003.1	777.1	632.4	587.0	572.5
21°	976.9	1063.7	1268.3	1368.9	989.3	757.1	614.5	571.8	556.0
22.5°	900.4	980.3	1203.5	1351.7	966.5	732.3	594.5	553.2	529.8
23°	870.8	960.3	1183.6	1346.8	959.0	726.1	588.3	544.9	524.3
24°	807.4	900.4	1142.2	1331.7	942.4	705.4	576.6	528.4	513.9
25°	723.4	849.4	1103.6	1315.8	928.7	690.3	564.9	515.3	496.7
26°	628.3	779.9	1068.5	1296.5	909.4	669.6	549.1	502.9	476.7
27°	569.7	719.9	1021.0	1275.9	895.6	654.5	536.0	484.3	465.7
28°	522.9	625.5	978.3	1255.9	879.1	635.9	527.0	471.2	449.2
29°	471.9	573.9	928.0	1229.0	861.1	614.5	512.6	458.1	434.7
30°	442.3	518.8	884.6	1209.0	839.8	600.0	495.3	445.0	421.6
32.5°	388.5	427.8	766.8	1151.9	799.1	558.7	467.1	409.2	389.2
35°	360.3	381.0	616.6	1085.0	753.0	524.3	434.7	379.6	361.7
37.5°	338.9	351.3	509.1	1013.4	706.1	494.0	405.1	352.0	334.8
40°	317.6	327.2	421.6	944.5	660.7	464.3	376.1	323.8	310.7
42.5°	298.3	305.9	365.8	876.3	613.8	434.0	347.9	301.7	290.0
45°	276.9	283.8	333.4	793.6	567.0	403.0	321.7	277.6	270.7
47.5°	259.0	263.9	302.4	719.9	520.8	373.4	294.9	258.3	253.5
50°	239.7	245.9	276.3	637.9	478.8	344.5	272.1	241.1	237.0
52.5°	221.1	223.9	254.2	556.0	434.7	316.2	248.0	223.9	221.1
55°	196.3	207.4	228.0	471.9	390.6	290.0	223.2	206.0	203.9
57.5°	168.1	182.6	204.6	396.1	349.3	261.1	203.2	189.5	180.5
60°	135.0	152.3	181.2	329.3	312.8	234.9	182.6	161.2	150.2
62.5°	118.5	124.0	159.8	275.6	275.6	210.1	161.9	138.5	133.6
65°	103.3	107.5	137.1	228.0	239.7	182.6	143.3	119.9	115.7



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
67.5°	90.2	93.7	104.7	190.1	206.7	159.1	118.5	104.7	99.9
70°	77.2	79.9	89.6	155.0	176.4	135.7	99.9	89.6	86.1
72.5°	65.4	68.2	73.7	116.4	144.7	113.0	84.0	76.5	73.7
75°	54.4	55.8	61.3	86.8	116.4	90.2	67.5	62.7	61.3
77.5°	44.1	44.8	48.2	62.0	90.2	68.9	54.4	50.3	49.6
80°	33.8	34.4	37.2	44.8	66.1	49.6	40.6	38.6	37.2
82.5°	24.1	24.8	26.2	30.3	44.8	33.8	28.9	28.2	26.2
85°	15.2	15.2	16.5	18.6	25.5	19.3	17.9	17.2	16.5
87.5°	6.9	6.9	7.6	7.6	11.7	8.3	8.3	7.6	6.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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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	17.18	18.65	17.54	18.96	19.27	19.87	21.34	20.24	21.65	21.97
	3H	18.29	19.61	18.67	19.94	20.30	21.31	22.63	21.69	22.96	23.32
	4H	18.74	19.97	19.14	20.32	20.70	21.82	23.05	22.22	23.40	23.78
	6H	19.08	20.22	19.49	20.58	20.98	22.14	23.28	22.56	23.65	24.04
	8H	19.19	20.28	19.62	20.67	21.07	22.23	23.31	22.66	23.70	24.10
	12H	19.27	20.30	19.70	20.69	21.12	22.28	23.31	22.71	23.70	24.12
4H	2H	18.35	19.58	18.75	19.93	20.31	20.33	21.56	20.73	21.91	22.29
	3H	19.57	20.59	19.99	20.99	21.40	21.98	23.00	22.39	23.40	23.80
	4H	20.05	20.97	20.49	21.39	21.83	22.62	23.54	23.06	23.96	24.39
	6H	20.46	21.25	20.91	21.69	22.16	23.08	23.87	23.53	24.32	24.78
	8H	20.59	21.33	21.05	21.78	22.25	23.20	23.95	23.67	24.39	24.86
	12H	20.69	21.35	21.17	21.83	22.30	23.28	23.95	23.77	24.43	24.90
8H	4H	20.46	21.20	20.92	21.64	22.11	22.73	23.48	23.20	23.92	24.39
	6H	20.95	21.56	21.44	22.05	22.53	23.30	23.91	23.79	24.40	24.88
	8H	21.14	21.69	21.65	22.20	22.69	23.50	24.05	24.01	24.56	25.05
	12H	21.29	21.78	21.81	22.27	22.84	23.64	24.13	24.15	24.62	25.19
12H	4H	20.50	21.17	20.99	21.64	22.12	22.72	23.39	23.21	23.87	24.34
	6H	21.02	21.57	21.53	22.08	22.57	23.29	23.84	23.81	24.35	24.84
	8H	21.26	21.74	21.77	22.24	22.80	23.54	24.02	24.05	24.52	25.08