

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: P1055967

Luminaire Tested: S124R3DR-S1020D927-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055967  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S1020D927-X4F0-XX-UDD-FLL-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

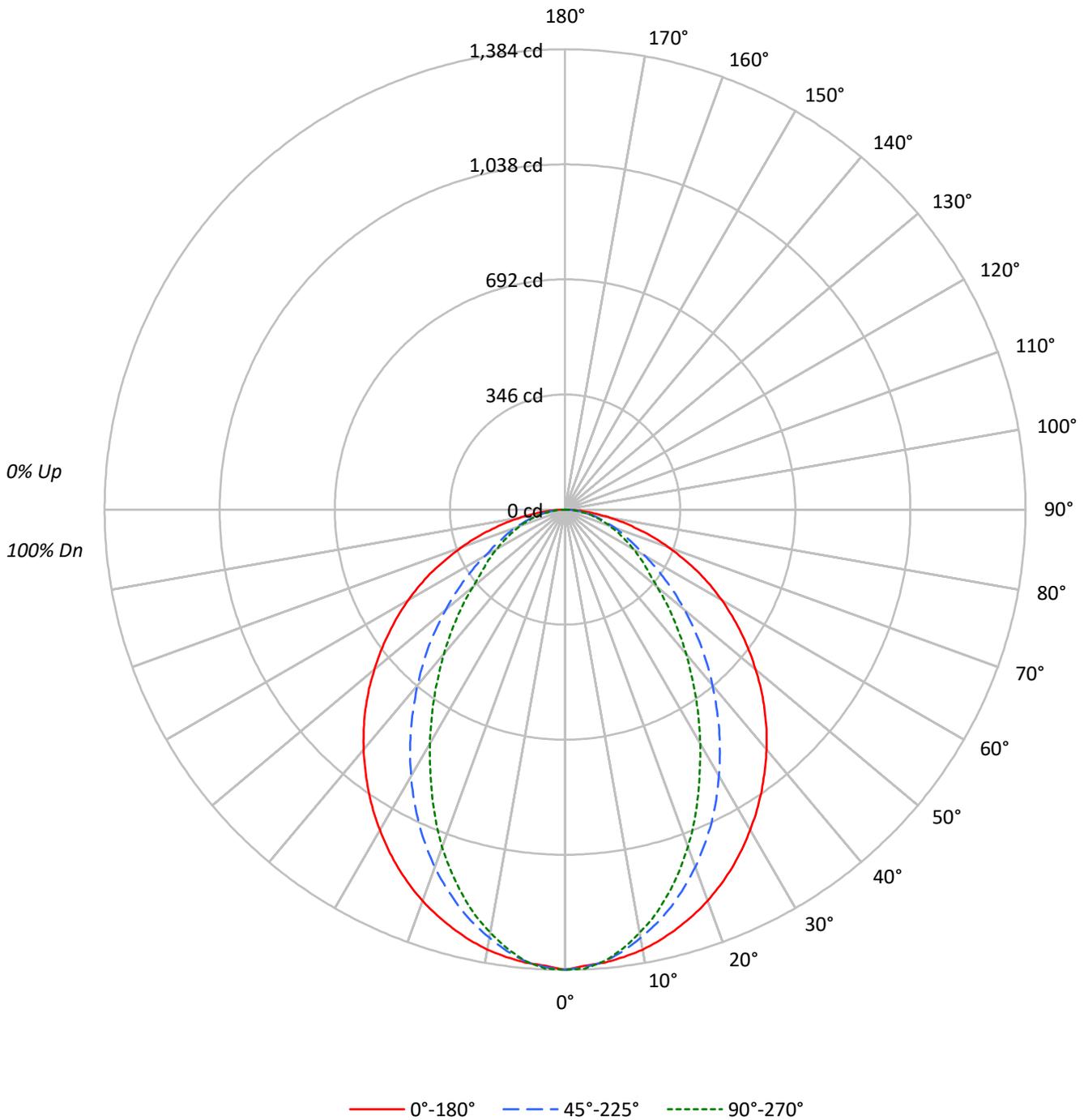
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2755.5 lumens  
Efficiency: N/A  
Efficacy: 79.4 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12  
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 34.7  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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

	0°	45°	90°
0°	12232	12232	12232
5°	12134	12107	12098
10°	12064	11744	11597
15°	11937	11302	10958
20°	11781	10766	10162
25°	11589	10149	9235
30°	11360	9448	8294
35°	11119	8713	7384
40°	10869	7954	6533
45°	10603	7217	5740
50°	10278	6441	4957
55°	9964	5665	4504
60°	9612	4861	4177
65°	9180	4408	3897
70°	8525	4079	3684
75°	7720	3754	3478
80°	6736	3472	3264
85°	5163	3206	2993

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 10603 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	128.8	4.7
10°-20°	349.4	12.7
20°-30°	483.8	17.6
30°-40°	519.2	18.8
40°-50°	472.2	17.1
50°-60°	371.8	13.5
60°-70°	254.5	9.2
70°-80°	137.0	5.0
80°-90°	38.8	1.4
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°	961.9	34.9
0°-40°	1481.2	53.8
0°-60°	2325.2	84.4
0°-90°	2755.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2755.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1384	1384	1384	1384	1384	
5°	1367	1382	1364	1357	1363	130
15°	1304	1290	1235	1201	1197	368
25°	1188	1139	1040	965	947	547
35°	1030	950	807	710	684	644
45°	848	740	577	477	459	654
55°	646	523	368	296	292	578
65°	439	314	211	187	186	433
75°	226	137	110	101	102	241
85°	51	35	32	30	30	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1383.5	1383.5	1383.5	1383.5	1383.5
2.5°	1373.3	1389.6	1377.4	1379.4	1381.4
5°	1367.2	1382.5	1364.1	1357.0	1363.1
7.5°	1357.0	1367.2	1338.7	1325.4	1331.6
10°	1343.8	1345.8	1308.1	1288.8	1291.8
12.5°	1325.4	1320.4	1274.5	1247.1	1249.1
15°	1304.1	1289.8	1234.8	1201.2	1197.2
17.5°	1279.6	1256.2	1191.1	1148.3	1140.2
20°	1252.1	1220.6	1144.2	1089.3	1080.1
22.5°	1221.6	1180.9	1093.3	1028.2	1015.0
25°	1188.0	1139.1	1040.4	965.1	946.7
27.5°	1151.4	1094.4	983.4	900.9	877.5
30°	1112.7	1047.5	925.4	836.8	812.4
32.5°	1073.0	999.7	866.3	772.7	747.2
35°	1030.2	949.8	807.3	709.6	684.1
37.5°	986.4	897.9	747.2	648.5	622.0
40°	941.7	846.0	689.2	587.4	566.0
42.5°	895.8	793.0	632.2	530.4	511.0
45°	848.0	740.1	577.2	477.4	459.1
47.5°	799.1	686.1	521.2	427.6	410.3
50°	747.2	632.2	468.3	378.7	360.4
52.5°	697.3	577.2	417.4	330.9	321.7
55°	646.4	523.3	367.5	296.2	292.2
57.5°	595.5	469.3	321.7	268.8	264.7
60°	543.6	416.4	274.9	240.2	236.2
62.5°	491.7	364.4	240.2	212.8	210.7
65°	438.8	313.5	210.7	187.3	186.3
67.5°	382.8	264.7	184.3	164.9	163.9
70°	329.8	215.8	157.8	142.5	142.5
72.5°	280.0	171.0	133.4	121.1	121.1
75°	226.0	137.4	109.9	100.8	101.8
77.5°	178.2	107.9	88.6	82.5	82.5
80°	132.3	80.4	68.2	63.1	64.1
82.5°	89.6	56.0	48.9	45.8	45.8
85°	50.9	34.6	31.6	29.5	29.5
87.5°	18.3	16.3	15.3	13.2	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)