

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: P1055977

Luminaire Tested: S124R3DR-S1020D950-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055977  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S1020D950-X4F0-XX-UDD-FLL-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

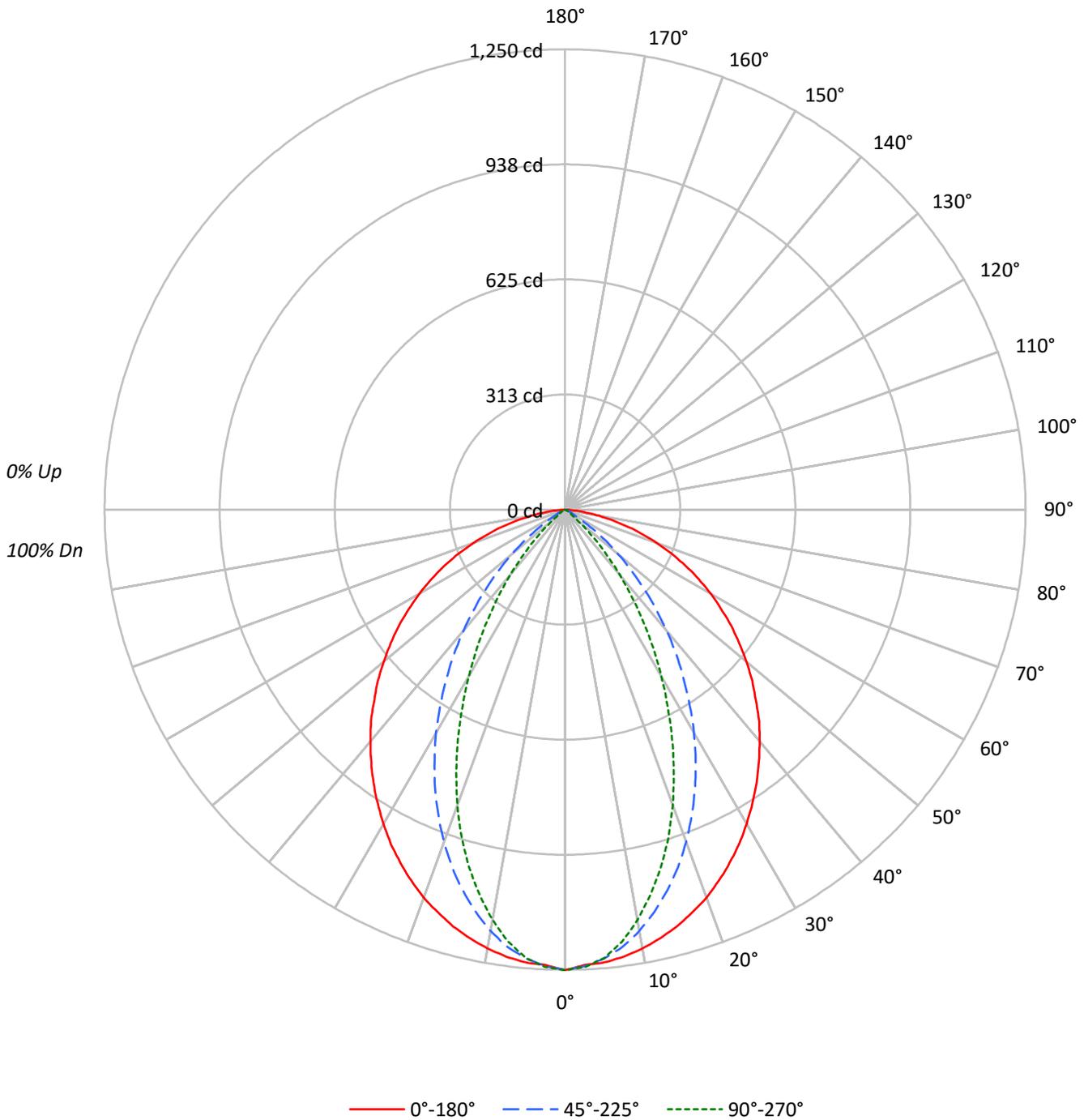
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1747.7 lumens  
Efficiency: N/A  
Efficacy: 50.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97  
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									
RC	80									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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90						90													
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80						80													
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71						71													
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64						64													
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57						57													
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52						52													
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47						47													
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43						43													
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40						40													
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37						37													

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

	0°	45°	90°
0°	11056	11056	11056
5°	10956	10859	10848
10°	10863	10434	10159
15°	10728	9808	9202
20°	10554	9043	8040
25°	10321	8145	6710
30°	10063	7146	5332
35°	9779	6060	3970
40°	9480	4939	2646
45°	9151	3771	1457
50°	8836	2580	404
55°	8486	1398	265
60°	8065	433	152
65°	7540	282	77
70°	6814	127	31
75°	5862	41	0
80°	4430	0	0
85°	1867	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 9151 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.4	6.6
10°-20°	302.9	17.3
20°-30°	391.3	22.4
30°-40°	374.0	21.4
40°-50°	279.7	16.0
50°-60°	166.5	9.5
60°-70°	84.5	4.8
70°-80°	29.4	1.7
80°-90°	4.0	0.2
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°	809.6	46.3
0°-40°	1183.6	67.7
0°-60°	1629.8	93.3
0°-90°	1747.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1747.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1250	1250	1250	1250	1250	
5°	1234	1244	1224	1217	1222	117
15°	1172	1148	1072	1021	1005	330
25°	1058	984	835	724	688	487
35°	906	781	562	418	368	567
45°	732	562	302	161	116	566
55°	550	342	91	21	17	491
65°	360	138	14	5	4	356
75°	172	18	1	1	0	182
85°	18	0	0	0	0	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1250.5	1250.5	1250.5	1250.5	1250.5
2.5°	1238.2	1252.9	1240.7	1241.9	1243.1
5°	1234.5	1244.3	1223.5	1217.4	1222.3
7.5°	1224.7	1228.4	1197.8	1181.8	1183.0
10°	1210.0	1206.3	1162.2	1135.2	1131.6
12.5°	1192.9	1180.6	1119.3	1080.1	1071.5
15°	1172.0	1147.5	1071.5	1021.2	1005.3
17.5°	1147.5	1111.9	1018.8	952.6	932.9
20°	1121.7	1072.7	961.1	879.0	854.5
22.5°	1091.1	1028.6	898.6	801.8	771.1
25°	1058.0	984.4	834.9	724.5	687.8
27.5°	1023.7	936.6	767.4	646.1	603.2
30°	985.7	886.4	700.0	566.4	522.3
32.5°	946.4	834.9	630.1	492.8	443.8
35°	906.0	780.9	561.5	418.0	367.8
37.5°	864.3	727.0	495.3	346.9	295.5
40°	821.4	671.8	427.9	279.5	229.3
42.5°	779.7	616.7	364.1	215.8	169.2
45°	731.9	561.5	301.6	160.6	116.5
47.5°	689.0	507.5	241.5	109.1	68.7
50°	642.4	449.9	187.6	63.7	29.4
52.5°	595.8	396.0	137.3	28.2	22.1
55°	550.5	342.0	90.7	20.8	17.2
57.5°	502.6	288.1	49.0	15.9	12.3
60°	456.1	235.4	24.5	12.3	8.6
62.5°	408.2	185.1	19.6	7.4	4.9
65°	360.4	138.5	13.5	4.9	3.7
67.5°	312.6	94.4	8.6	2.5	1.2
70°	263.6	57.6	4.9	1.2	1.2
72.5°	217.0	29.4	2.5	1.2	1.2
75°	171.6	18.4	1.2	1.2	0.0
77.5°	127.5	9.8	1.2	1.2	0.0
80°	87.0	3.7	0.0	0.0	0.0
82.5°	50.3	1.2	0.0	0.0	0.0
85°	18.4	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)