

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: P1055965

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

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055965  
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-S1020D927-X4F0-XX-UDD-FLL-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

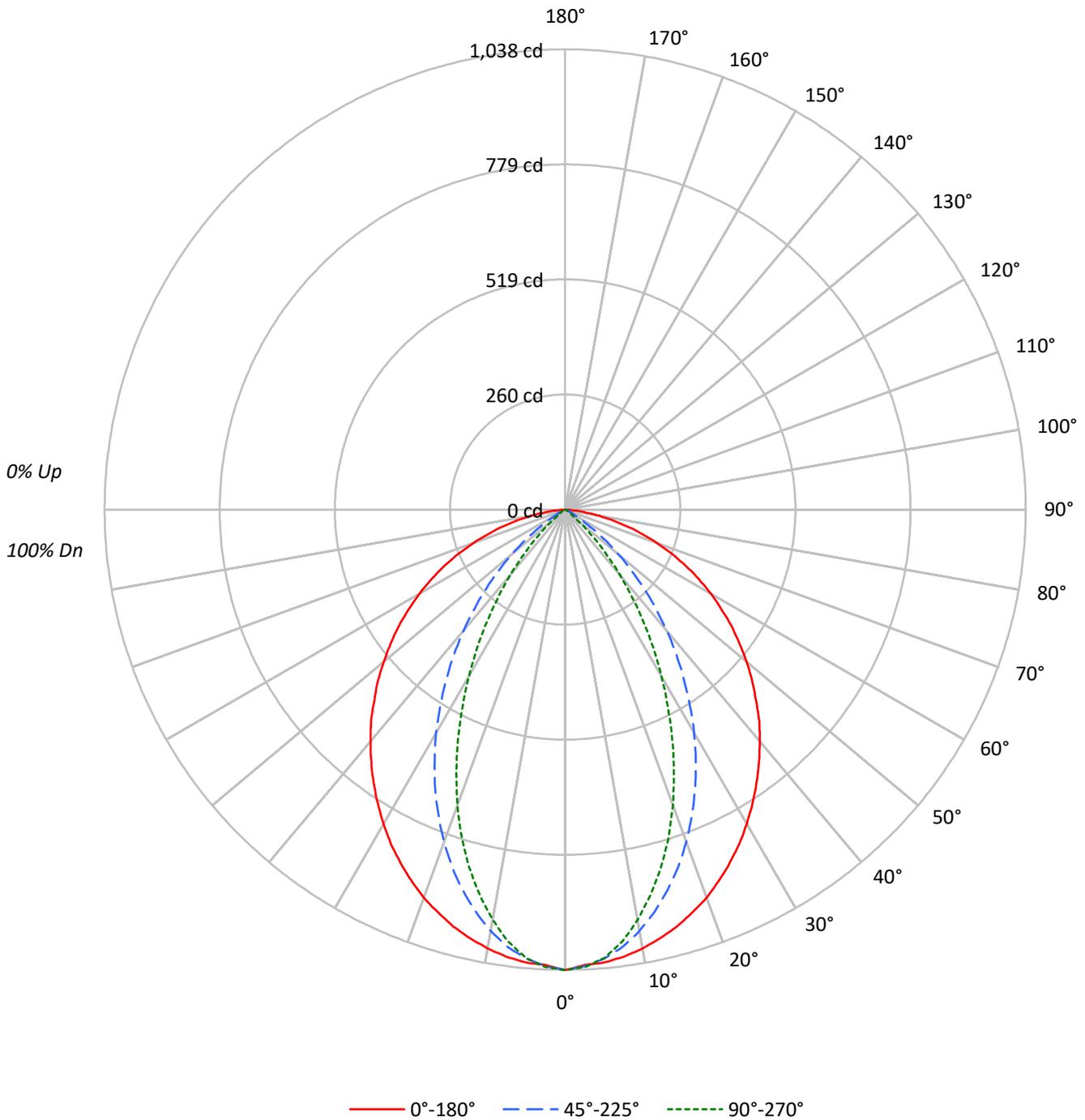
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1451.3 lumens  
Efficiency: N/A  
Efficacy: 41.8 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					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	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°	9181	9181	9181
5°	9098	9017	9007
10°	9021	8664	8436
15°	8908	8144	7641
20°	8764	7509	6676
25°	8570	6763	5571
30°	8356	5935	4428
35°	8120	5032	3296
40°	7873	4101	2198
45°	7598	3131	1209
50°	7337	2143	336
55°	7046	1161	220
60°	6696	361	126
65°	6261	234	65
70°	5659	106	26
75°	4868	34	0
80°	3681	0	0
85°	1552	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7598 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	95.8	6.6
10°-20°	251.5	17.3
20°-30°	325.0	22.4
30°-40°	310.6	21.4
40°-50°	232.3	16.0
50°-60°	138.2	9.5
60°-70°	70.2	4.8
70°-80°	24.4	1.7
80°-90°	3.3	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°	672.2	46.3
0°-40°	982.8	67.7
0°-60°	1353.4	93.3
0°-90°	1451.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1451.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1038	1038	1038	1038	1038	
5°	1025	1033	1016	1011	1015	97
15°	973	953	890	848	835	274
25°	878	818	693	602	571	405
35°	752	648	466	347	305	470
45°	608	466	250	133	97	470
55°	457	284	75	17	14	408
65°	299	115	11	4	3	296
75°	142	15	1	1	0	151
85°	15	0	0	0	0	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1038.4	1038.4	1038.4	1038.4	1038.4
2.5°	1028.2	1040.4	1030.2	1031.2	1032.3
5°	1025.1	1033.3	1016.0	1010.9	1014.9
7.5°	1017.0	1020.0	994.6	981.4	982.4
10°	1004.8	1001.7	965.1	942.7	939.6
12.5°	990.5	980.3	929.4	896.9	889.7
15°	973.2	952.9	889.7	848.0	834.8
17.5°	952.9	923.3	846.0	791.0	774.7
20°	931.5	890.8	798.1	729.9	709.5
22.5°	906.0	854.1	746.2	665.8	640.3
25°	878.5	817.5	693.3	601.6	571.1
27.5°	850.0	777.8	637.3	536.5	500.9
30°	818.5	736.0	581.3	470.3	433.7
32.5°	785.9	693.3	523.3	409.2	368.5
35°	752.3	648.5	466.2	347.1	305.4
37.5°	717.7	603.7	411.3	288.1	245.3
40°	682.1	557.9	355.3	232.1	190.4
42.5°	647.5	512.1	302.3	179.2	140.5
45°	607.7	466.2	250.4	133.4	96.7
47.5°	572.1	421.5	200.5	90.6	57.0
50°	533.4	373.6	155.8	52.9	24.4
52.5°	494.7	328.8	114.0	23.4	18.3
55°	457.1	284.0	75.3	17.3	14.3
57.5°	417.4	239.2	40.7	13.2	10.2
60°	378.7	195.5	20.4	10.2	7.1
62.5°	339.0	153.7	16.3	6.1	4.1
65°	299.3	115.0	11.2	4.1	3.1
67.5°	259.6	78.4	7.1	2.0	1.0
70°	218.9	47.8	4.1	1.0	1.0
72.5°	180.2	24.4	2.0	1.0	1.0
75°	142.5	15.3	1.0	1.0	0.0
77.5°	105.9	8.1	1.0	1.0	0.0
80°	72.3	3.1	0.0	0.0	0.0
82.5°	41.7	1.0	0.0	0.0	0.0
85°	15.3	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)