

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: P1055972

Luminaire Tested: S124R3DR-S1020D935-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055972  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S1020D935-X4F0-XX-UDD-FLL-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

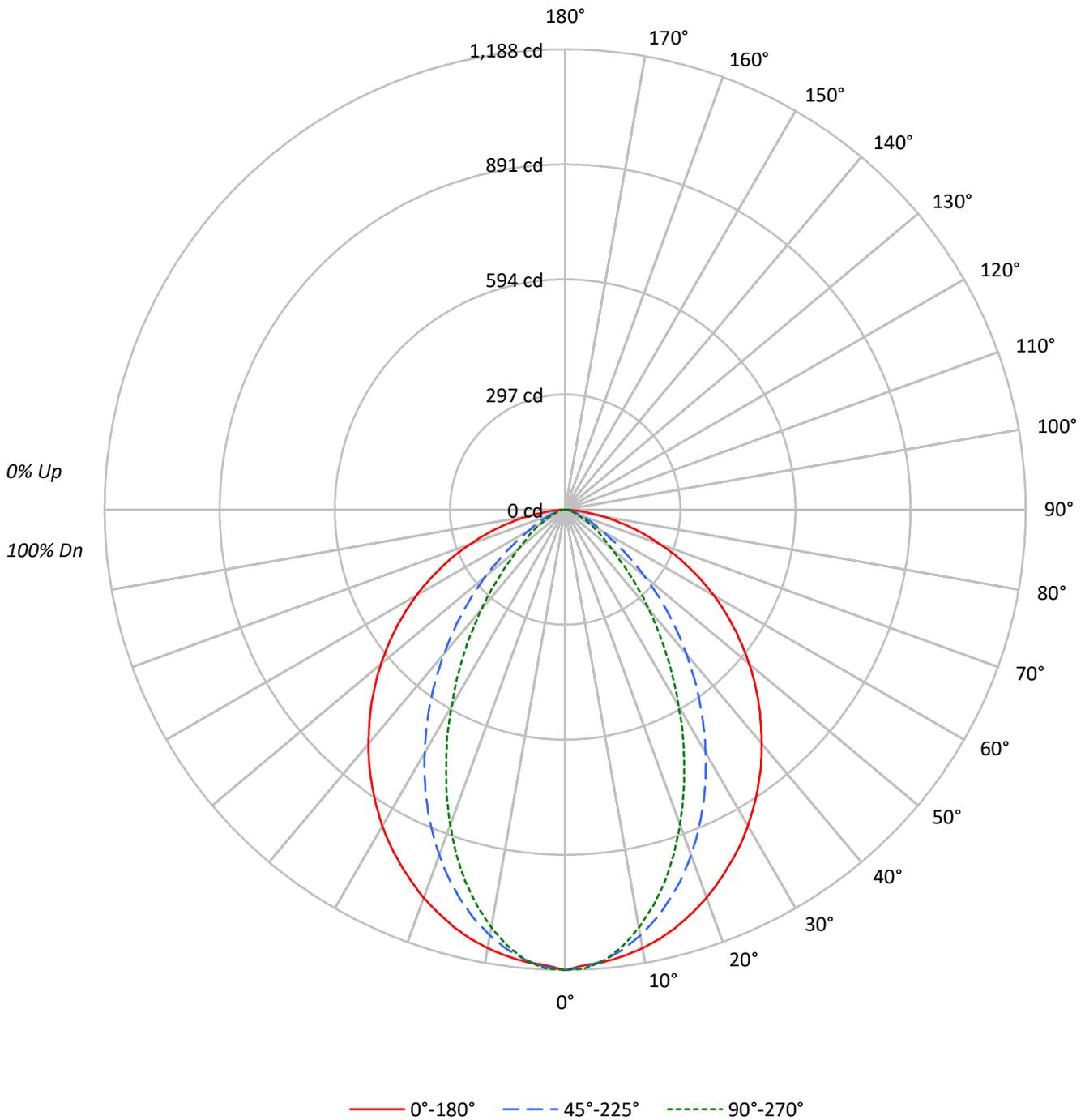
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1921.5 lumens  
Efficiency: N/A  
Efficacy: 55.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03  
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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89			89	
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78			78	
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68			68	
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60			60	
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54			54	
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48			48	
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44			44	
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40			40	
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37			37	
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34			34	

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

	0°	45°	90°
0°	10506	10506	10506
5°	10399	10360	10360
10°	10321	10023	9834
15°	10199	9540	9095
20°	10035	8932	8151
25°	9833	8214	7080
30°	9624	7399	5964
35°	9375	6532	4908
40°	9105	5606	3870
45°	8826	4663	2891
50°	8522	3668	2115
55°	8187	2711	1688
60°	7826	1878	1291
65°	7360	1458	950
70°	6664	1029	744
75°	5821	717	567
80°	4674	565	509
85°	2577	446	446

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8826 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.2	5.7
10°-20°	294.5	15.3
20°-30°	392.8	20.4
30°-40°	395.5	20.6
40°-50°	324.4	16.9
50°-60°	221.7	11.5
60°-70°	123.9	6.4
70°-80°	49.1	2.6
80°-90°	9.3	0.5
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°	797.5	41.5
0°-40°	1193.1	62.1
0°-60°	1739.1	90.5
0°-90°	1921.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1921.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1188	1188	1188	1188	1188	
5°	1172	1185	1167	1162	1167	111
15°	1114	1102	1042	1006	994	314
25°	1008	958	842	757	726	464
35°	869	777	605	490	455	543
45°	706	576	373	262	231	544
55°	531	373	176	117	110	475
65°	352	177	70	50	45	348
75°	170	46	21	18	17	183
85°	25	4	4	4	4	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1188.3	<i>1188.3</i>	1188.3	1188.3	1188.3
2.5°	<i>1177.2</i>	<i>1191.6</i>	<i>1181.7</i>	<i>1182.8</i>	<i>1185.0</i>
5°	1171.7	<i>1185.0</i>	1167.3	1161.8	1167.3
7.5°	1161.8	<i>1171.7</i>	1145.2	1134.1	1136.3
10°	1149.6	<i>1152.9</i>	1116.4	1097.6	1095.4
12.5°	1134.1	<i>1129.7</i>	1082.1	1054.4	1047.8
15°	1114.2	<i>1102.0</i>	1042.3	1005.8	993.6
17.5°	1090.9	<i>1069.9</i>	998.0	950.4	932.7
20°	1066.6	<i>1035.6</i>	949.3	888.5	866.3
22.5°	1037.8	<i>999.1</i>	897.3	823.2	797.7
25°	1008.0	<i>958.2</i>	842.0	756.8	725.8
27.5°	977.0	<i>916.1</i>	784.5	689.3	658.3
30°	942.7	<i>870.8</i>	724.7	621.8	584.2
32.5°	906.2	<i>824.3</i>	665.0	555.4	520.0
35°	868.6	<i>776.7</i>	605.2	490.2	454.7
37.5°	829.8	<i>728.0</i>	545.5	428.2	392.8
40°	788.9	<i>678.2</i>	485.7	369.6	335.3
42.5°	746.8	<i>627.4</i>	428.2	314.2	282.1
45°	705.9	<i>576.5</i>	372.9	262.2	231.2
47.5°	662.8	<i>525.6</i>	318.7	213.5	187.0
50°	619.6	<i>474.7</i>	266.7	171.5	153.8
52.5°	575.3	<i>423.8</i>	219.1	140.5	128.3
55°	531.1	<i>372.9</i>	175.9	117.3	109.5
57.5°	486.8	<i>322.0</i>	136.1	99.6	90.7
60°	442.6	<i>272.2</i>	106.2	80.8	73.0
62.5°	397.2	<i>222.4</i>	87.4	64.2	57.5
65°	351.8	<i>177.0</i>	69.7	49.8	45.4
67.5°	306.5	<i>135.0</i>	53.1	38.7	35.4
70°	257.8	<i>96.3</i>	39.8	29.9	28.8
72.5°	215.8	<i>65.3</i>	28.8	23.2	22.1
75°	170.4	<i>46.5</i>	21.0	17.7	16.6
77.5°	131.7	<i>29.9</i>	15.5	14.4	13.3
80°	91.8	<i>16.6</i>	11.1	10.0	10.0
82.5°	56.4	<i>8.9</i>	7.7	6.6	6.6
85°	25.4	<i>4.4</i>	4.4	4.4	4.4
87.5°	4.4	<i>2.2</i>	2.2	2.2	2.2
90°	0.0	<i>0.0</i>	0.0	0.0	0.0

(END OF REPORT)