

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: P1056029

Luminaire Tested: S124R3DR-S350D940-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

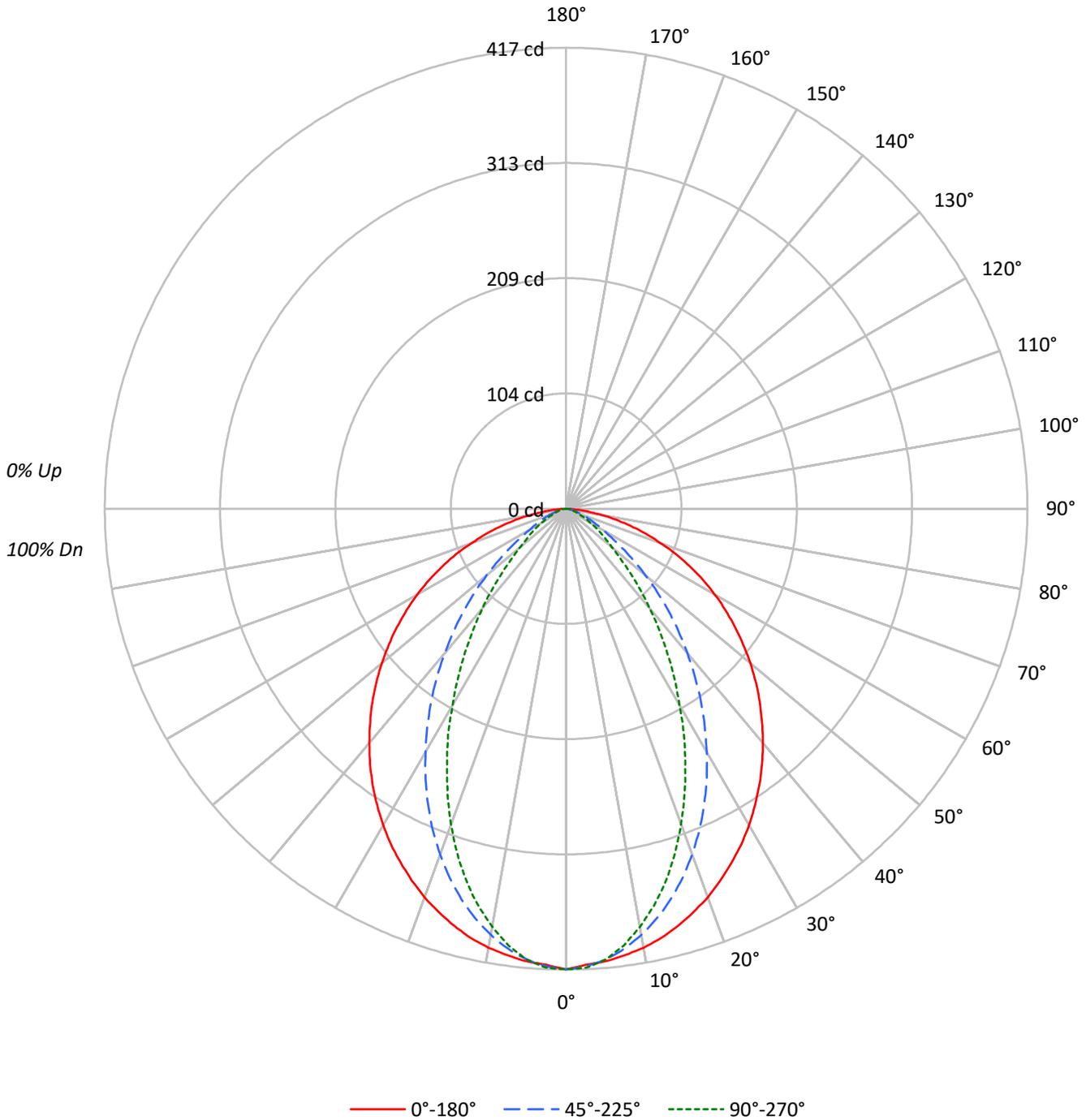
Test Method: LM-79-2019  
Report Number: P1056029  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S350D940-X4F0-XX-UDD-FLL-S  
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 674.0 lumens  
Efficiency: N/A  
Efficacy: 53.5 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): 12.6  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

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

	0°	45°	90°
0°	3685	3685	3685
5°	3648	3634	3634
10°	3621	3516	3449
15°	3577	3346	3190
20°	3521	3133	2859
25°	3450	2882	2484
30°	3376	2595	2092
35°	3289	2291	1722
40°	3194	1967	1357
45°	3096	1635	1014
50°	2989	1286	741
55°	2872	951	592
60°	2744	660	453
65°	2582	513	333
70°	2337	362	261
75°	2043	253	198
80°	1639	199	178
85°	903	162	162

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 3096 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.7	5.7
10°-20°	103.3	15.3
20°-30°	137.8	20.4
30°-40°	138.7	20.6
40°-50°	113.8	16.9
50°-60°	77.8	11.5
60°-70°	43.5	6.4
70°-80°	17.2	2.6
80°-90°	3.3	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
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0°-30°	279.8	41.5
0°-40°	418.5	62.1
0°-60°	610.1	90.5
0°-90°	674.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	674.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	417	417	417	417	417	
5°	411	416	410	408	410	39
15°	391	387	366	353	348	110
25°	354	336	295	266	255	163
35°	305	272	212	172	160	191
45°	248	202	131	92	81	191
55°	186	131	62	41	38	167
65°	123	62	24	18	16	122
75°	60	16	7	6	6	64
85°	9	2	2	2	2	13
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	416.8	416.8	416.8	416.8	416.8
2.5°	413.0	418.0	414.5	414.9	415.7
5°	411.0	415.7	409.5	407.5	409.5
7.5°	407.5	411.0	401.7	397.8	398.6
10°	403.3	404.4	391.6	385.0	384.2
12.5°	397.8	396.3	379.6	369.9	367.6
15°	390.8	386.6	365.6	352.8	348.5
17.5°	382.7	375.3	350.1	333.4	327.2
20°	374.2	363.3	333.0	311.7	303.9
22.5°	364.1	350.5	314.8	288.8	279.8
25°	353.6	336.1	295.4	265.5	254.6
27.5°	342.7	321.4	275.2	241.8	230.9
30°	330.7	305.5	254.2	218.1	204.9
32.5°	317.9	289.2	233.3	194.8	182.4
35°	304.7	272.5	212.3	171.9	159.5
37.5°	291.1	255.4	191.3	150.2	137.8
40°	276.7	237.9	170.4	129.6	117.6
42.5°	262.0	220.1	150.2	110.2	99.0
45°	247.6	202.2	130.8	92.0	81.1
47.5°	232.5	184.4	111.8	74.9	65.6
50°	217.3	166.5	93.5	60.2	53.9
52.5°	201.8	148.7	76.8	49.3	45.0
55°	186.3	130.8	61.7	41.1	38.4
57.5°	170.8	112.9	47.7	34.9	31.8
60°	155.2	95.5	37.3	28.3	25.6
62.5°	139.3	78.0	30.7	22.5	20.2
65°	123.4	62.1	24.5	17.5	15.9
67.5°	107.5	47.4	18.6	13.6	12.4
70°	90.4	33.8	14.0	10.5	10.1
72.5°	75.7	22.9	10.1	8.2	7.8
75°	59.8	16.3	7.4	6.2	5.8
77.5°	46.2	10.5	5.4	5.0	4.7
80°	32.2	5.8	3.9	3.5	3.5
82.5°	19.8	3.1	2.7	2.3	2.3
85°	8.9	1.6	1.6	1.6	1.6
87.5°	1.6	0.8	0.8	0.8	0.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)