

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056033

Luminaire Tested: S124R3DR-S350D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056033  
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-S350D950-X4F0-XX-UDD-F-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 90 CRI LEDS  
Ballast/Driver: -

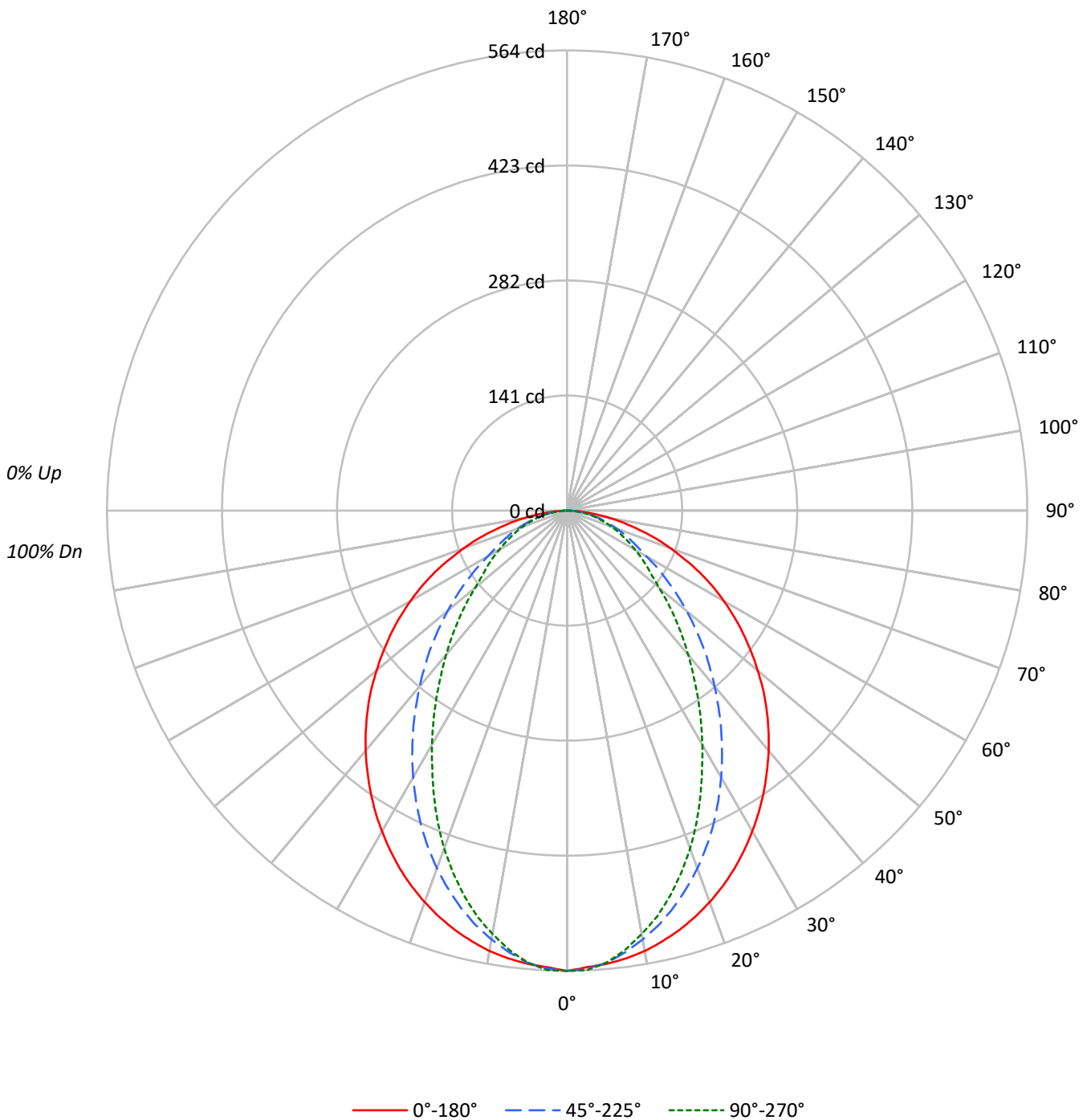
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1124.0 lumens  
Efficiency: N/A  
Efficacy: 89.2 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): 12.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	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	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°	4989	4989	4989
5°	4950	4938	4935
10°	4921	4791	4730
15°	4869	4611	4470
20°	4805	4391	4146
25°	4727	4140	3768
30°	4634	3854	3383
35°	4535	3554	3011
40°	4433	3244	2665
45°	4325	2943	2342
50°	4192	2627	2022
55°	4065	2311	1837
60°	3920	1982	1703
65°	3745	1799	1590
70°	3477	1665	1502
75°	3150	1530	1418
80°	2749	1415	1334
85°	2110	1309	1217

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4325 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	52.5	4.7
10°-20°	142.5	12.7
20°-30°	197.3	17.6
30°-40°	211.8	18.8
40°-50°	192.6	17.1
50°-60°	151.7	13.5
60°-70°	103.8	9.2
70°-80°	55.9	5.0
80°-90°	15.8	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°	392.4	34.9
0°-40°	604.2	53.8
0°-60°	948.4	84.4
0°-90°	1124.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1124.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	564	564	564	564	564	
5°	558	564	556	554	556	53
15°	532	526	504	490	488	150
25°	485	465	424	394	386	223
35°	420	387	329	289	279	263
45°	346	302	235	195	187	267
55°	264	213	150	121	119	236
65°	179	128	86	76	76	177
75°	92	56	45	41	42	98
85°	21	14	13	12	12	25
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	564.3	564.3	564.3	564.3	564.3
2.5°	560.2	566.8	561.8	562.6	563.5
5°	557.7	563.9	556.4	553.5	556.0
7.5°	553.5	557.7	546.0	540.6	543.1
10°	548.1	548.9	533.6	525.7	526.9
12.5°	540.6	538.6	519.9	508.7	509.5
15°	531.9	526.1	503.7	490.0	488.3
17.5°	522.0	512.4	485.8	468.4	465.1
20°	510.7	497.9	466.7	444.3	440.6
22.5°	498.3	481.7	446.0	419.4	414.0
25°	484.6	464.7	424.4	393.6	386.2
27.5°	469.6	446.4	401.1	367.5	357.9
30°	453.9	427.3	377.5	341.3	331.4
32.5°	437.7	407.8	353.4	315.2	304.8
35°	420.2	387.4	329.3	289.4	279.0
37.5°	402.4	366.2	304.8	264.5	253.7
40°	384.1	345.1	281.1	239.6	230.9
42.5°	365.4	323.5	257.9	216.3	208.4
45°	345.9	301.9	235.4	194.7	187.3
47.5°	326.0	279.9	212.6	174.4	167.3
50°	304.8	257.9	191.0	154.5	147.0
52.5°	284.4	235.4	170.2	135.0	131.2
55°	263.7	213.4	149.9	120.8	119.2
57.5°	242.9	191.4	131.2	109.6	108.0
60°	221.7	169.8	112.1	98.0	96.3
62.5°	200.6	148.7	98.0	86.8	86.0
65°	179.0	127.9	86.0	76.4	76.0
67.5°	156.1	108.0	75.2	67.3	66.9
70°	134.5	88.0	64.4	58.1	58.1
72.5°	114.2	69.8	54.4	49.4	49.4
75°	92.2	56.1	44.8	41.1	41.5
77.5°	72.7	44.0	36.1	33.6	33.6
80°	54.0	32.8	27.8	25.7	26.2
82.5°	36.5	22.8	19.9	18.7	18.7
85°	20.8	14.1	12.9	12.0	12.0
87.5°	7.5	6.6	6.2	5.4	5.8
90°	0.0	0.0	0.0	0.0	0.0



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**CIE UGR TABLE:**

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	16.72	18.25	17.09	18.56	18.88	12.50	14.03	12.87	14.34	14.66
	3H	18.50	19.87	18.88	20.20	20.56	14.11	15.48	14.49	15.81	16.17
	4H	19.17	20.46	19.57	20.81	21.19	14.75	16.03	15.15	16.38	16.76
	6H	19.68	20.87	20.09	21.24	21.63	15.24	16.43	15.66	16.80	17.19
	8H	19.84	20.98	20.27	21.37	21.77	15.42	16.55	15.84	16.94	17.34
	12H	19.94	21.03	20.37	21.41	21.84	15.54	16.62	15.97	17.00	17.43
4H	2H	16.82	18.11	17.22	18.46	18.83	13.22	14.51	13.62	14.86	15.23
	3H	18.77	19.84	19.18	20.23	20.64	15.03	16.10	15.44	16.50	16.90
	4H	19.52	20.49	19.95	20.90	21.34	15.77	16.73	16.20	17.15	17.58
	6H	20.16	21.00	20.61	21.44	21.90	16.38	17.22	16.84	17.66	18.12
	8H	20.38	21.16	20.84	21.60	22.07	16.60	17.38	17.06	17.83	18.29
	12H	20.53	21.23	21.01	21.71	22.18	16.76	17.47	17.25	17.94	18.42
8H	4H	19.58	20.36	20.04	20.81	21.27	16.15	16.94	16.62	17.38	17.85
	6H	20.28	20.93	20.77	21.42	21.90	16.89	17.53	17.38	18.03	18.50
	8H	20.55	21.13	21.06	21.64	22.13	17.17	17.76	17.69	18.27	18.75
	12H	20.76	21.28	21.27	21.77	22.33	17.42	17.93	17.93	18.43	18.99
12H	4H	19.57	20.27	20.05	20.75	21.22	16.21	16.91	16.69	17.39	17.86
	6H	20.27	20.85	20.78	21.36	21.85	16.97	17.55	17.48	18.06	18.55
	8H	20.58	21.09	21.09	21.59	22.15	17.32	17.83	17.83	18.32	18.89