

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: P1056030

Luminaire Tested: S124R3DR-S350D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1056030  
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-S350D940-X4F0-XX-UDD-F-W  
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

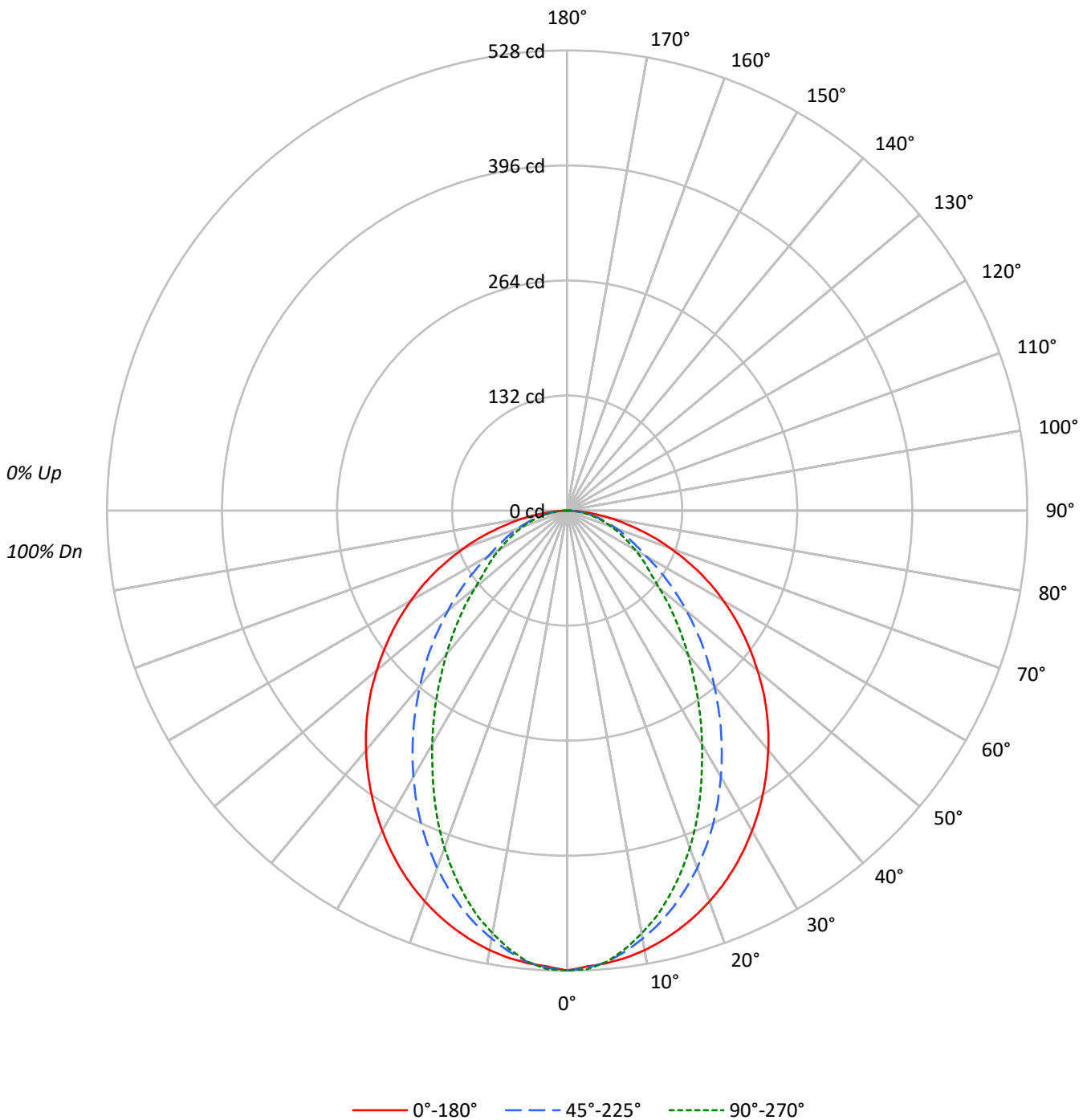
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1050.5 lumens  
Efficiency: N/A  
Efficacy: 83.4 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 (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	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°	4664	4664	4664
5°	4627	4616	4612
10°	4599	4477	4422
15°	4551	4309	4178
20°	4492	4105	3875
25°	4418	3870	3522
30°	4331	3602	3162
35°	4240	3322	2815
40°	4143	3033	2491
45°	4042	2752	2188
50°	3919	2455	1890
55°	3800	2160	1717
60°	3666	1853	1591
65°	3500	1680	1485
70°	3252	1556	1404
75°	2945	1431	1325
80°	2571	1324	1247
85°	1968	1217	1146

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4042 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	49.1	4.7
10°-20°	133.2	12.7
20°-30°	184.4	17.6
30°-40°	198.0	18.8
40°-50°	180.0	17.1
50°-60°	141.8	13.5
60°-70°	97.0	9.2
70°-80°	52.2	5.0
80°-90°	14.8	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°	366.8	34.9
0°-40°	564.7	53.8
0°-60°	886.5	84.4
0°-90°	1050.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1050.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	528	528	528	528	528	
5°	521	527	520	517	520	49
15°	497	492	471	458	456	140
25°	453	434	397	368	361	209
35°	393	362	308	270	261	246
45°	323	282	220	182	175	249
55°	246	200	140	113	111	220
65°	167	120	80	71	71	165
75°	86	52	42	38	39	92
85°	19	13	12	11	11	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	527.5	527.5	527.5	527.5	527.5
2.5°	523.6	529.8	525.1	525.9	526.7
5°	521.3	527.1	520.1	517.4	519.7
7.5°	517.4	521.3	510.4	505.3	507.7
10°	512.3	513.1	498.7	491.4	492.5
12.5°	505.3	503.4	485.9	475.5	476.2
15°	497.2	491.8	470.8	458.0	456.4
17.5°	487.9	478.9	454.1	437.8	434.7
20°	477.4	465.4	436.3	415.3	411.8
22.5°	465.8	450.2	416.8	392.0	387.0
25°	452.9	434.3	396.7	367.9	361.0
27.5°	439.0	417.2	374.9	343.5	334.6
30°	424.2	399.4	352.8	319.0	309.7
32.5°	409.1	381.1	330.3	294.6	284.9
35°	392.8	362.1	307.8	270.5	260.8
37.5°	376.1	342.3	284.9	247.2	237.1
40°	359.0	322.5	262.8	223.9	215.8
42.5°	341.6	302.3	241.0	202.2	194.8
45°	323.3	282.2	220.1	182.0	175.0
47.5°	304.7	261.6	198.7	163.0	156.4
50°	284.9	241.0	178.5	144.4	137.4
52.5°	265.9	220.1	159.1	126.1	122.6
55°	246.5	199.5	140.1	112.9	111.4
57.5°	227.1	178.9	122.6	102.5	100.9
60°	207.3	158.7	104.8	91.6	90.0
62.5°	187.5	138.9	91.6	81.1	80.3
65°	167.3	119.5	80.3	71.4	71.0
67.5°	145.9	100.9	70.3	62.9	62.5
70°	125.8	82.3	60.2	54.3	54.3
72.5°	106.7	65.2	50.8	46.2	46.2
75°	86.2	52.4	41.9	38.4	38.8
77.5°	67.9	41.1	33.8	31.4	31.4
80°	50.5	30.7	26.0	24.1	24.5
82.5°	34.2	21.3	18.6	17.5	17.5
85°	19.4	13.2	12.0	11.3	11.3
87.5°	7.0	6.2	5.8	5.0	5.4
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	16.49	18.02	16.86	18.33	18.64	12.27	13.80	12.64	14.11	14.42
	3H	18.27	19.64	18.64	19.96	20.33	13.88	15.25	14.26	15.58	15.94
	4H	18.94	20.22	19.34	20.57	20.95	14.51	15.80	14.91	16.15	16.52
	6H	19.45	20.64	19.86	21.00	21.39	15.01	16.20	15.42	16.57	16.96
	8H	19.61	20.74	20.04	21.13	21.53	15.18	16.31	15.61	16.70	17.11
	12H	19.71	20.79	20.14	21.18	21.61	15.31	16.39	15.74	16.77	17.20
4H	2H	16.59	17.87	16.99	18.22	18.60	12.99	14.27	13.39	14.62	15.00
	3H	18.53	19.60	18.94	20.00	20.40	14.79	15.86	15.21	16.26	16.67
	4H	19.29	20.25	19.72	20.67	21.10	15.53	16.50	15.96	16.91	17.35
	6H	19.92	20.76	20.38	21.20	21.66	16.15	16.99	16.60	17.43	17.89
	8H	20.14	20.93	20.60	21.37	21.84	16.36	17.15	16.83	17.59	18.06
	12H	20.30	21.00	20.78	21.48	21.95	16.53	17.23	17.02	17.71	18.18
8H	4H	19.34	20.13	19.81	20.57	21.04	15.92	16.70	16.38	17.15	17.62
	6H	20.04	20.69	20.54	21.18	21.66	16.65	17.30	17.15	17.79	18.27
	8H	20.31	20.89	20.82	21.40	21.89	16.94	17.52	17.46	18.03	18.52
	12H	20.53	21.04	21.04	21.54	22.10	17.19	17.70	17.70	18.20	18.76
12H	4H	19.34	20.04	19.82	20.52	20.99	15.98	16.68	16.46	17.16	17.63
	6H	20.04	20.62	20.55	21.13	21.62	16.73	17.32	17.25	17.83	18.32
	8H	20.35	20.86	20.85	21.35	21.92	17.08	17.60	17.59	18.09	18.66