

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: P1056021

Luminaire Tested: S124R3DR-S350D927-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056021
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-S350D927-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

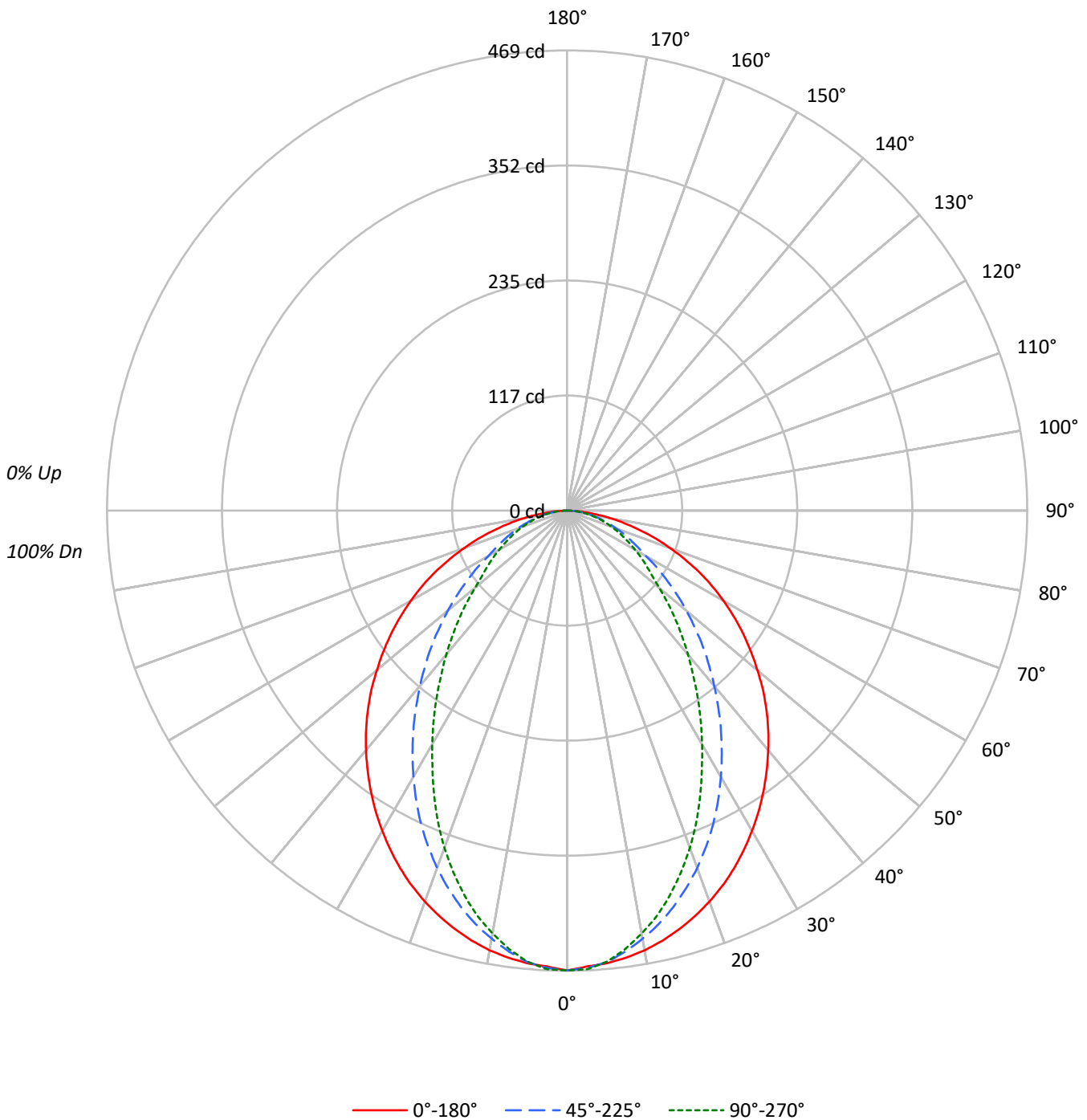
Lumens per Lamp: N/A
Luminaire Lumens: 933.3 lumens
Efficiency: N/A
Efficacy: 74.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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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CATALOG NUMBER: S124R3DR-S350D927-X4F0-XX-UDD-F-W

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	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°	4143	4143	4143
5°	4110	4100	4098
10°	4086	3978	3929
15°	4043	3828	3712
20°	3990	3647	3442
25°	3926	3438	3129
30°	3848	3200	2810
35°	3766	2951	2501
40°	3681	2694	2213
45°	3591	2444	1944
50°	3481	2182	1679
55°	3376	1919	1526
60°	3255	1646	1415
65°	3109	1494	1320
70°	2887	1380	1249
75°	2613	1271	1179
80°	2281	1176	1105
85°	1745	1085	1014

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3591 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.6	4.7
10°-20°	118.3	12.7
20°-30°	163.9	17.6
30°-40°	175.9	18.8
40°-50°	159.9	17.1
50°-60°	126.0	13.5
60°-70°	86.2	9.2
70°-80°	46.4	5.0
80°-90°	13.1	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°	325.8	34.9
0°-40°	501.7	53.8
0°-60°	787.6	84.4
0°-90°	933.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	933.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	469	469	469	469	469	
5°	463	468	462	460	462	44
15°	442	437	418	407	406	125
25°	402	386	352	327	321	185
35°	349	322	273	240	232	218
45°	287	251	196	162	156	221
55°	219	177	124	100	99	196
65°	149	106	71	63	63	147
75°	76	46	37	34	34	82
85°	17	12	11	10	10	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	468.6	468.6	468.6	468.6	468.6
2.5°	465.1	470.7	466.5	467.2	467.9
5°	463.1	468.2	462.0	459.6	461.7
7.5°	459.6	463.1	453.4	448.9	451.0
10°	455.1	455.8	443.1	436.5	437.6
12.5°	448.9	447.2	431.7	422.4	423.1
15°	441.7	436.9	418.2	406.9	405.5
17.5°	433.4	425.5	403.4	388.9	386.2
20°	424.1	413.4	387.6	368.9	365.8
22.5°	413.8	400.0	370.3	348.3	343.8
25°	402.4	385.8	352.4	326.9	320.7
27.5°	390.0	370.7	333.1	305.2	297.2
30°	376.9	354.8	313.4	283.4	275.2
32.5°	363.4	338.6	293.4	261.7	253.1
35°	348.9	321.7	273.4	240.3	231.7
37.5°	334.1	304.1	253.1	219.6	210.7
40°	318.9	286.5	233.4	199.0	191.7
42.5°	303.4	268.6	214.1	179.6	173.1
45°	287.2	250.7	195.5	161.7	155.5
47.5°	270.7	232.4	176.5	144.8	139.0
50°	253.1	214.1	158.6	128.3	122.1
52.5°	236.2	195.5	141.4	112.1	109.0
55°	219.0	177.2	124.5	100.3	99.0
57.5°	201.7	159.0	109.0	91.0	89.6
60°	184.1	141.0	93.1	81.4	80.0
62.5°	166.5	123.4	81.4	72.1	71.4
65°	148.6	106.2	71.4	63.4	63.1
67.5°	129.6	89.6	62.4	55.9	55.5
70°	111.7	73.1	53.4	48.3	48.3
72.5°	94.8	57.9	45.2	41.0	41.0
75°	76.5	46.5	37.2	34.1	34.5
77.5°	60.3	36.5	30.0	27.9	27.9
80°	44.8	27.2	23.1	21.4	21.7
82.5°	30.3	19.0	16.6	15.5	15.5
85°	17.2	11.7	10.7	10.0	10.0
87.5°	6.2	5.5	5.2	4.5	4.8
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	16.08	17.61	16.45	17.92	18.23	11.86	13.38	12.22	13.69	14.01
	3H	17.86	19.23	18.23	19.55	19.91	13.47	14.84	13.85	15.17	15.53
	4H	18.53	19.81	18.93	20.16	20.54	14.10	15.39	14.50	15.73	16.11
	6H	19.03	20.22	19.45	20.59	20.98	14.60	15.79	15.01	16.15	16.54
	8H	19.20	20.33	19.62	20.72	21.12	14.77	15.90	15.19	16.29	16.69
	12H	19.30	20.38	19.73	20.76	21.19	14.89	15.97	15.32	16.36	16.79
4H	2H	16.18	17.46	16.58	17.81	18.19	12.57	13.86	12.97	14.21	14.59
	3H	18.12	19.19	18.53	19.59	19.99	14.38	15.45	14.79	15.85	16.25
	4H	18.87	19.84	19.31	20.25	20.69	15.12	16.08	15.55	16.50	16.94
	6H	19.51	20.35	19.97	20.79	21.25	15.74	16.57	16.19	17.02	17.48
	8H	19.73	20.51	20.19	20.96	21.42	15.95	16.74	16.41	17.18	17.65
	12H	19.88	20.58	20.36	21.06	21.53	16.12	16.82	16.60	17.30	17.77
8H	4H	18.93	19.72	19.40	20.16	20.63	15.51	16.29	15.97	16.74	17.20
	6H	19.63	20.28	20.13	20.77	21.25	16.24	16.89	16.74	17.38	17.86
	8H	19.90	20.48	20.41	20.99	21.48	16.53	17.11	17.04	17.62	18.11
	12H	20.12	20.63	20.62	21.12	21.69	16.77	17.29	17.28	17.78	18.34
12H	4H	18.92	19.63	19.41	20.10	20.57	15.56	16.27	16.05	16.74	17.21
	6H	19.62	20.21	20.14	20.72	21.20	16.32	16.91	16.84	17.42	17.90
	8H	19.93	20.45	20.44	20.94	21.50	16.67	17.19	17.18	17.68	18.24