

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: P1056019

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056019
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
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-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

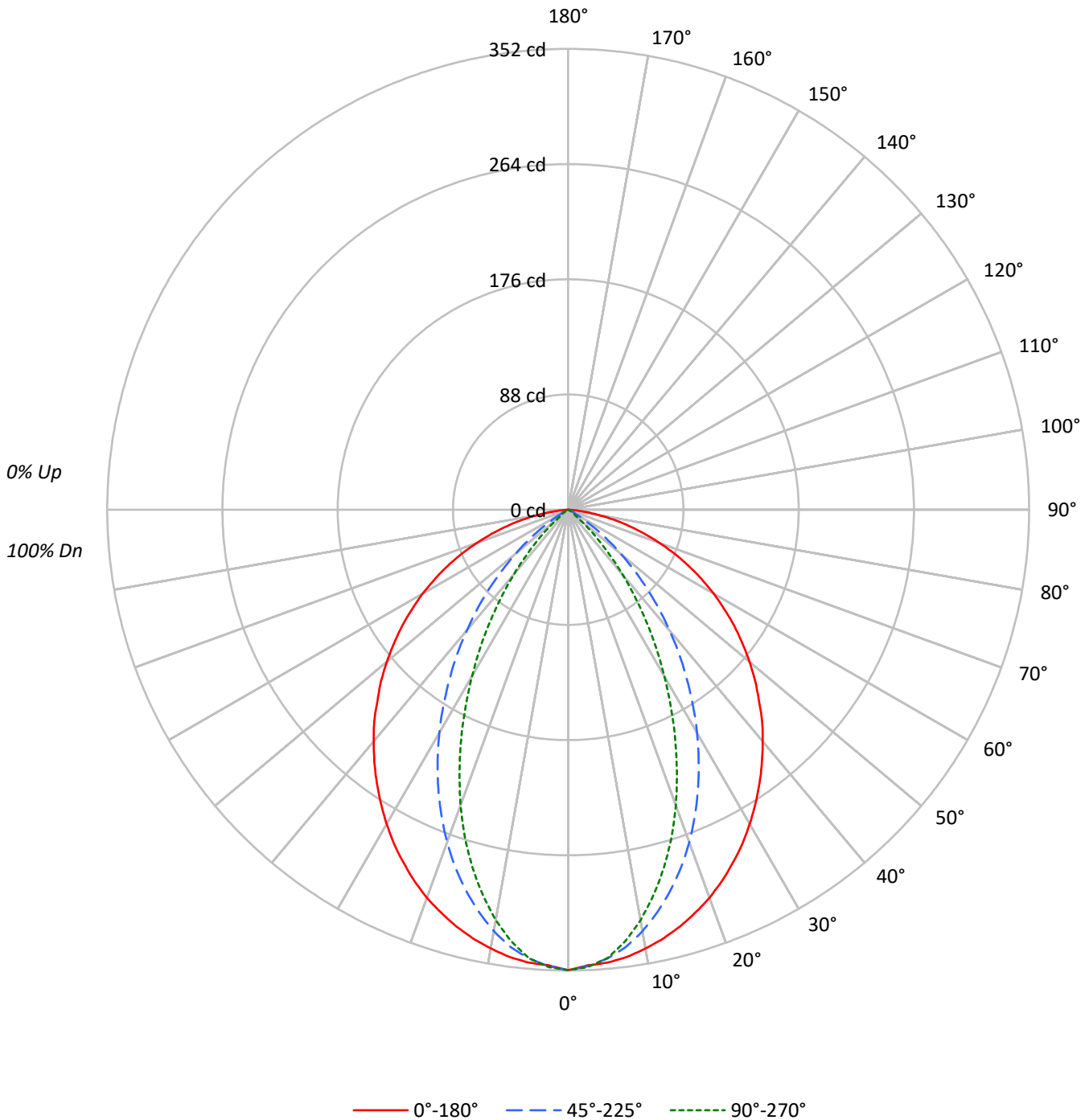
Lumens per Lamp: N/A
Luminaire Lumens: 491.5 lumens
Efficiency: N/A
Efficacy: 39.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (A_{in}): 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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3110	3110	3110
5°	3081	3054	3051
10°	3055	2935	2858
15°	3017	2759	2588
20°	2968	2543	2261
25°	2903	2291	1887
30°	2830	2010	1500
35°	2750	1704	1116
40°	2666	1388	744
45°	2573	1060	410
50°	2485	726	114
55°	2386	393	74
60°	2269	122	42
65°	2121	79	21
70°	1916	36	8
75°	1650	10	0
80°	1247	0	0
85°	528	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2573 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.4	6.6
10°-20°	85.2	17.3
20°-30°	110.1	22.4
30°-40°	105.2	21.4
40°-50°	78.7	16.0
50°-60°	46.8	9.5
60°-70°	23.8	4.8
70°-80°	8.3	1.7
80°-90°	1.1	0.2
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°	227.7	46.3
0°-40°	332.9	67.7
0°-60°	458.4	93.3
0°-90°	491.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	491.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	352	352	352	352	352	
5°	347	350	344	342	344	33
15°	330	323	301	287	283	93
25°	298	277	235	204	193	137
35°	255	220	158	118	103	159
45°	206	158	85	45	33	159
55°	155	96	26	6	5	138
65°	101	39	4	1	1	100
75°	48	5	0	0	0	51
85°	5	0	0	0	0	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	351.7	351.7	351.7	351.7	351.7
2.5°	348.3	352.4	348.9	349.3	349.6
5°	347.2	350.0	344.1	342.4	343.8
7.5°	344.5	345.5	336.9	332.4	332.7
10°	340.3	339.3	326.9	319.3	318.3
12.5°	335.5	332.0	314.8	303.8	301.4
15°	329.6	322.7	301.4	287.2	282.7
17.5°	322.7	312.7	286.5	267.9	262.4
20°	315.5	301.7	270.3	247.2	240.3
22.5°	306.9	289.3	252.7	225.5	216.9
25°	297.6	276.9	234.8	203.8	193.4
27.5°	287.9	263.4	215.8	181.7	169.6
30°	277.2	249.3	196.9	159.3	146.9
32.5°	266.2	234.8	177.2	138.6	124.8
35°	254.8	219.6	157.9	117.6	103.4
37.5°	243.1	204.5	139.3	97.6	83.1
40°	231.0	189.0	120.3	78.6	64.5
42.5°	219.3	173.4	102.4	60.7	47.6
45°	205.8	157.9	84.8	45.2	32.8
47.5°	193.8	142.7	67.9	30.7	19.3
50°	180.7	126.5	52.8	17.9	8.3
52.5°	167.6	111.4	38.6	7.9	6.2
55°	154.8	96.2	25.5	5.9	4.8
57.5°	141.4	81.0	13.8	4.5	3.4
60°	128.3	66.2	6.9	3.4	2.4
62.5°	114.8	52.1	5.5	2.1	1.4
65°	101.4	39.0	3.8	1.4	1.0
67.5°	87.9	26.5	2.4	0.7	0.3
70°	74.1	16.2	1.4	0.3	0.3
72.5°	61.0	8.3	0.7	0.3	0.3
75°	48.3	5.2	0.3	0.3	0.0
77.5°	35.9	2.8	0.3	0.3	0.0
80°	24.5	1.0	0.0	0.0	0.0
82.5°	14.1	0.3	0.0	0.0	0.0
85°	5.2	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	14.40	15.72	14.76	16.04	16.35	0.00	0.00	0.00	0.00	0.00
	3H	15.94	17.11	16.32	17.44	17.81	0.00	0.00	0.00	0.00	0.00
	4H	16.53	17.63	16.93	17.98	18.36	0.00	0.00	0.00	0.00	0.00
	6H	16.95	17.96	17.37	18.33	18.72	0.00	0.00	0.00	0.00	0.00
	8H	17.05	18.00	17.48	18.39	18.80	0.00	0.00	0.00	0.00	0.00
	12H	17.07	17.98	17.50	18.36	18.79	0.00	0.00	0.00	0.00	0.00
4H	2H	14.17	15.27	14.58	15.62	16.00	0.00	0.00	0.00	0.00	0.00
	3H	15.74	16.63	16.15	17.03	17.44	0.00	0.00	0.00	0.00	0.00
	4H	16.32	17.12	16.76	17.54	17.98	0.00	0.00	0.00	0.00	0.00
	6H	16.78	17.47	17.24	17.91	18.38	0.00	0.00	0.00	0.00	0.00
	8H	16.90	17.54	17.37	17.99	18.46	0.00	0.00	0.00	0.00	0.00
	12H	16.94	17.51	17.43	17.99	18.46	0.00	0.00	0.00	0.00	0.00
8H	4H	16.18	16.83	16.65	17.27	17.74	0.00	0.00	0.00	0.00	0.00
	6H	16.63	17.15	17.13	17.64	18.13	0.00	0.00	0.00	0.00	0.00
	8H	16.74	17.21	17.26	17.73	18.22	0.00	0.00	0.00	0.00	0.00
	12H	16.79	17.20	17.31	17.70	18.27	0.00	0.00	0.00	0.00	0.00
12H	4H	16.14	16.70	16.62	17.19	17.66	0.00	0.00	0.00	0.00	0.00
	6H	16.56	17.03	17.09	17.55	18.04	0.00	0.00	0.00	0.00	0.00
	8H	16.70	17.11	17.21	17.61	18.18	0.00	0.00	0.00	0.00	0.00