

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: P1056031

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056031
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-S350D950-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

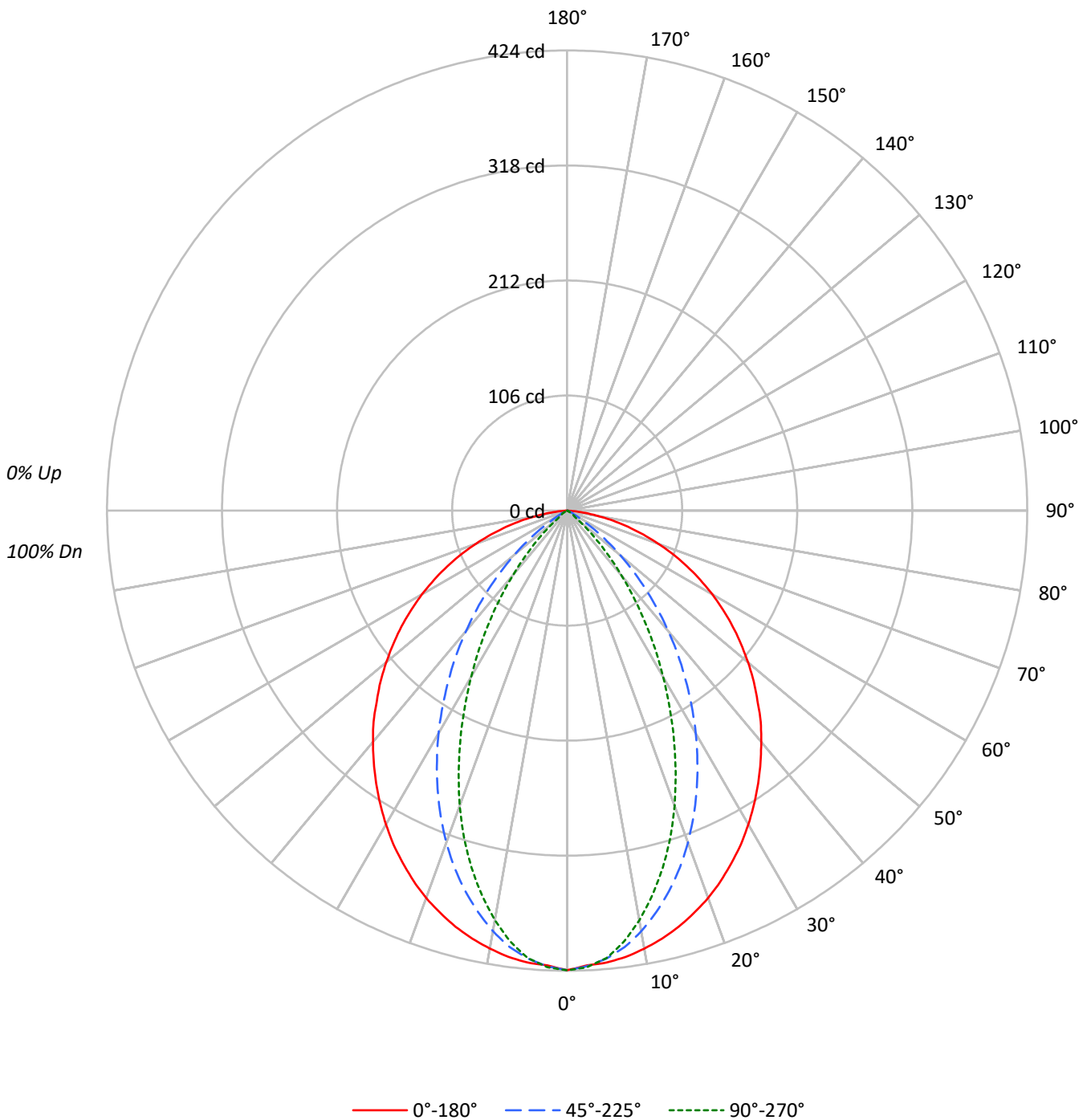
Lumens per Lamp: N/A
Luminaire Lumens: 592.0 lumens
Efficiency: N/A
Efficacy: 47.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3744	3744	3744
5°	3711	3678	3674
10°	3679	3534	3441
15°	3634	3322	3117
20°	3574	3063	2723
25°	3495	2759	2272
30°	3409	2421	1806
35°	3312	2053	1345
40°	3211	1672	896
45°	3100	1277	493
50°	2993	873	138
55°	2873	473	89
60°	2732	147	51
65°	2554	96	25
70°	2308	44	10
75°	1985	14	0
80°	1502	0	0
85°	629	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3100 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.1	6.6
10°-20°	102.6	17.3
20°-30°	132.5	22.4
30°-40°	126.7	21.4
40°-50°	94.7	16.0
50°-60°	56.4	9.5
60°-70°	28.6	4.8
70°-80°	9.9	1.7
80°-90°	1.4	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°	274.2	46.3
0°-40°	400.9	67.7
0°-60°	552.0	93.3
0°-90°	592.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	592.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	424	424	424	424	424	
5°	418	422	414	412	414	40
15°	397	389	363	346	340	112
25°	358	333	283	245	233	165
35°	307	264	190	142	125	192
45°	248	190	102	54	39	192
55°	186	116	31	7	6	166
65°	122	47	5	2	1	121
75°	58	6	0	0	0	62
85°	6	0	0	0	0	10
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	423.5	423.5	423.5	423.5	423.5
2.5°	419.4	424.4	420.2	420.6	421.1
5°	418.1	421.5	414.4	412.3	414.0
7.5°	414.8	416.1	405.7	400.3	400.7
10°	409.8	408.6	393.6	384.5	383.3
12.5°	404.0	399.9	379.1	365.8	362.9
15°	397.0	388.7	362.9	345.9	340.5
17.5°	388.7	376.6	345.1	322.6	316.0
20°	379.9	363.3	325.5	297.7	289.4
22.5°	369.6	348.4	304.4	271.6	261.2
25°	358.3	333.4	282.8	245.4	232.9
27.5°	346.7	317.2	259.9	218.8	204.3
30°	333.9	300.2	237.1	191.8	176.9
32.5°	320.6	282.8	213.4	166.9	150.3
35°	306.9	264.5	190.2	141.6	124.6
37.5°	292.7	246.2	167.8	117.5	100.1
40°	278.2	227.5	144.9	94.7	77.6
42.5°	264.1	208.9	123.3	73.1	57.3
45°	247.9	190.2	102.1	54.4	39.4
47.5°	233.4	171.9	81.8	37.0	23.3
50°	217.6	152.4	63.5	21.6	10.0
52.5°	201.8	134.1	46.5	9.6	7.5
55°	186.4	115.9	30.7	7.1	5.8
57.5°	170.2	97.6	16.6	5.4	4.2
60°	154.5	79.7	8.3	4.2	2.9
62.5°	138.3	62.7	6.6	2.5	1.7
65°	122.1	46.9	4.6	1.7	1.2
67.5°	105.9	32.0	2.9	0.8	0.4
70°	89.3	19.5	1.7	0.4	0.4
72.5°	73.5	10.0	0.8	0.4	0.4
75°	58.1	6.2	0.4	0.4	0.0
77.5°	43.2	3.3	0.4	0.4	0.0
80°	29.5	1.2	0.0	0.0	0.0
82.5°	17.0	0.4	0.0	0.0	0.0
85°	6.2	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	15.04	16.37	15.41	16.68	17.00	0.00	0.00	0.00	0.00	0.00
	3H	16.59	17.76	16.97	18.09	18.46	0.00	0.00	0.00	0.00	0.00
	4H	17.18	18.27	17.58	18.63	19.01	0.00	0.00	0.00	0.00	0.00
	6H	17.60	18.60	18.01	18.97	19.37	0.00	0.00	0.00	0.00	0.00
	8H	17.69	18.65	18.12	19.04	19.44	0.00	0.00	0.00	0.00	0.00
	12H	17.71	18.62	18.15	19.01	19.44	0.00	0.00	0.00	0.00	0.00
4H	2H	14.82	15.92	15.22	16.27	16.65	0.00	0.00	0.00	0.00	0.00
	3H	16.38	17.28	16.80	17.68	18.09	0.00	0.00	0.00	0.00	0.00
	4H	16.97	17.76	17.40	18.18	18.63	0.00	0.00	0.00	0.00	0.00
	6H	17.43	18.11	17.89	18.56	19.03	0.00	0.00	0.00	0.00	0.00
	8H	17.55	18.19	18.02	18.63	19.11	0.00	0.00	0.00	0.00	0.00
	12H	17.59	18.15	18.07	18.63	19.11	0.00	0.00	0.00	0.00	0.00
8H	4H	16.83	17.47	17.30	17.92	18.39	0.00	0.00	0.00	0.00	0.00
	6H	17.27	17.79	17.77	18.29	18.77	0.00	0.00	0.00	0.00	0.00
	8H	17.39	17.86	17.91	18.37	18.86	0.00	0.00	0.00	0.00	0.00
	12H	17.44	17.85	17.95	18.34	18.92	0.00	0.00	0.00	0.00	0.00
12H	4H	16.79	17.35	17.27	17.83	18.31	0.00	0.00	0.00	0.00	0.00
	6H	17.21	17.68	17.73	18.19	18.69	0.00	0.00	0.00	0.00	0.00
	8H	17.34	17.76	17.86	18.25	18.82	0.00	0.00	0.00	0.00	0.00