

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: P1056023

Luminaire Tested: S124R3DR-S350D930-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056023
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-S350D930-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

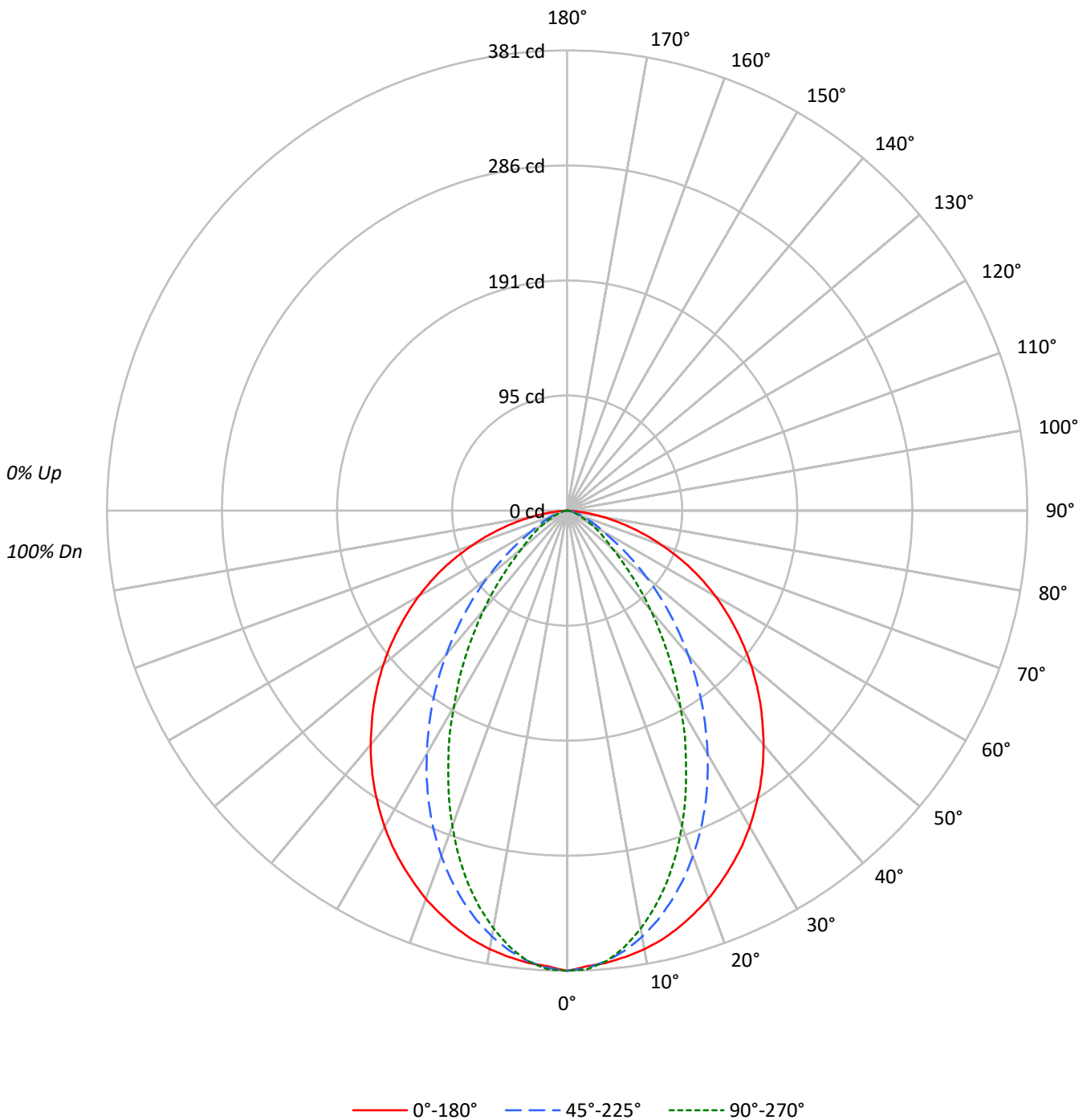
Lumens per Lamp: N/A
Luminaire Lumens: 616.2 lumens
Efficiency: N/A
Efficacy: 48.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3369	3369	3369
5°	3335	3323	3323
10°	3310	3215	3154
15°	3270	3060	2917
20°	3219	2865	2615
25°	3154	2635	2271
30°	3086	2373	1913
35°	3007	2095	1574
40°	2920	1798	1241
45°	2831	1495	928
50°	2733	1176	678
55°	2625	869	541
60°	2509	603	414
65°	2360	469	303
70°	2138	331	238
75°	1865	229	181
80°	1502	178	163
85°	832	142	142

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2831 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.4	5.7
10°-20°	94.5	15.3
20°-30°	126.0	20.4
30°-40°	126.8	20.6
40°-50°	104.0	16.9
50°-60°	71.1	11.5
60°-70°	39.7	6.4
70°-80°	15.8	2.6
80°-90°	3.0	0.5
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°	255.8	41.5
0°-40°	382.6	62.1
0°-60°	557.8	90.5
0°-90°	616.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	616.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	381	381	381	381	381	
5°	376	380	374	373	374	36
15°	357	353	334	323	319	101
25°	323	307	270	243	233	149
35°	279	249	194	157	146	174
45°	226	185	120	84	74	175
55°	170	120	56	38	35	152
65°	113	57	22	16	14	111
75°	55	15	7	6	5	59
85°	8	1	1	1	1	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	381.1	381.1	381.1	381.1	381.1
2.5°	377.6	382.2	379.0	379.4	380.1
5°	375.8	380.1	374.4	372.6	374.4
7.5°	372.6	375.8	367.3	363.7	364.4
10°	368.7	369.8	358.1	352.0	351.3
12.5°	363.7	362.3	347.1	338.2	336.1
15°	357.3	353.4	334.3	322.6	318.7
17.5°	349.9	343.2	320.1	304.8	299.2
20°	342.1	332.2	304.5	285.0	277.9
22.5°	332.9	320.4	287.8	264.0	255.9
25°	323.3	307.3	270.1	242.7	232.8
27.5°	313.3	293.8	251.6	221.1	211.1
30°	302.3	279.3	232.4	199.4	187.4
32.5°	290.6	264.4	213.3	178.1	166.8
35°	278.6	249.1	194.1	157.2	145.8
37.5°	266.1	233.5	174.9	137.3	126.0
40°	253.0	217.5	155.8	118.5	107.5
42.5°	239.5	201.2	137.3	100.8	90.5
45°	226.4	184.9	119.6	84.1	74.2
47.5°	212.6	168.6	102.2	68.5	60.0
50°	198.7	152.2	85.5	55.0	49.3
52.5°	184.5	135.9	70.3	45.1	41.2
55°	170.3	119.6	56.4	37.6	35.1
57.5°	156.1	103.3	43.6	31.9	29.1
60°	141.9	87.3	34.1	25.9	23.4
62.5°	127.4	71.3	28.0	20.6	18.5
65°	112.8	56.8	22.4	16.0	14.5
67.5°	98.3	43.3	17.0	12.4	11.4
70°	82.7	30.9	12.8	9.6	9.2
72.5°	69.2	20.9	9.2	7.5	7.1
75°	54.6	14.9	6.7	5.7	5.3
77.5°	42.2	9.6	5.0	4.6	4.3
80°	29.5	5.3	3.5	3.2	3.2
82.5°	18.1	2.8	2.5	2.1	2.1
85°	8.2	1.4	1.4	1.4	1.4
87.5°	1.4	0.7	0.7	0.7	0.7
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	14.95	16.35	15.31	16.67	16.98	6.03	7.44	6.39	7.75	8.06
	3H	16.53	17.78	16.91	18.11	18.48	6.62	7.87	7.00	8.20	8.57
	4H	17.13	18.29	17.53	18.64	19.03	6.78	7.95	7.18	8.30	8.68
	6H	17.56	18.63	17.97	19.00	19.40	6.89	7.96	7.30	8.33	8.73
	8H	17.67	18.69	18.10	19.08	19.49	6.91	7.93	7.34	8.32	8.72
	12H	17.71	18.69	18.15	19.07	19.50	6.91	7.89	7.35	8.27	8.70
4H	2H	14.80	15.97	15.20	16.32	16.70	6.61	7.78	7.02	8.13	8.51
	3H	16.45	17.41	16.86	17.81	18.21	7.33	8.29	7.74	8.69	9.09
	4H	17.05	17.91	17.49	18.33	18.77	7.53	8.39	7.97	8.81	9.25
	6H	17.55	18.29	18.01	18.73	19.20	7.70	8.44	8.16	8.89	9.35
	8H	17.69	18.38	18.15	18.83	19.29	7.73	8.43	8.20	8.87	9.34
	12H	17.76	18.37	18.25	18.86	19.33	7.76	8.37	8.24	8.85	9.32
8H	4H	16.95	17.64	17.41	18.08	18.55	7.81	8.50	8.27	8.94	9.41
	6H	17.43	17.99	17.93	18.49	18.97	8.01	8.58	8.51	9.07	9.55
	8H	17.57	18.08	18.09	18.59	19.08	8.07	8.57	8.58	9.09	9.58
	12H	17.66	18.11	18.18	18.60	19.17	8.12	8.57	8.63	9.06	9.63
12H	4H	16.91	17.52	17.39	18.00	18.47	7.83	8.45	8.32	8.93	9.40
	6H	17.37	17.88	17.89	18.39	18.88	8.04	8.55	8.56	9.06	9.55
	8H	17.54	17.98	18.05	18.48	19.05	8.13	8.58	8.64	9.07	9.64