

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: P1056020

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056020
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-S350D927-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

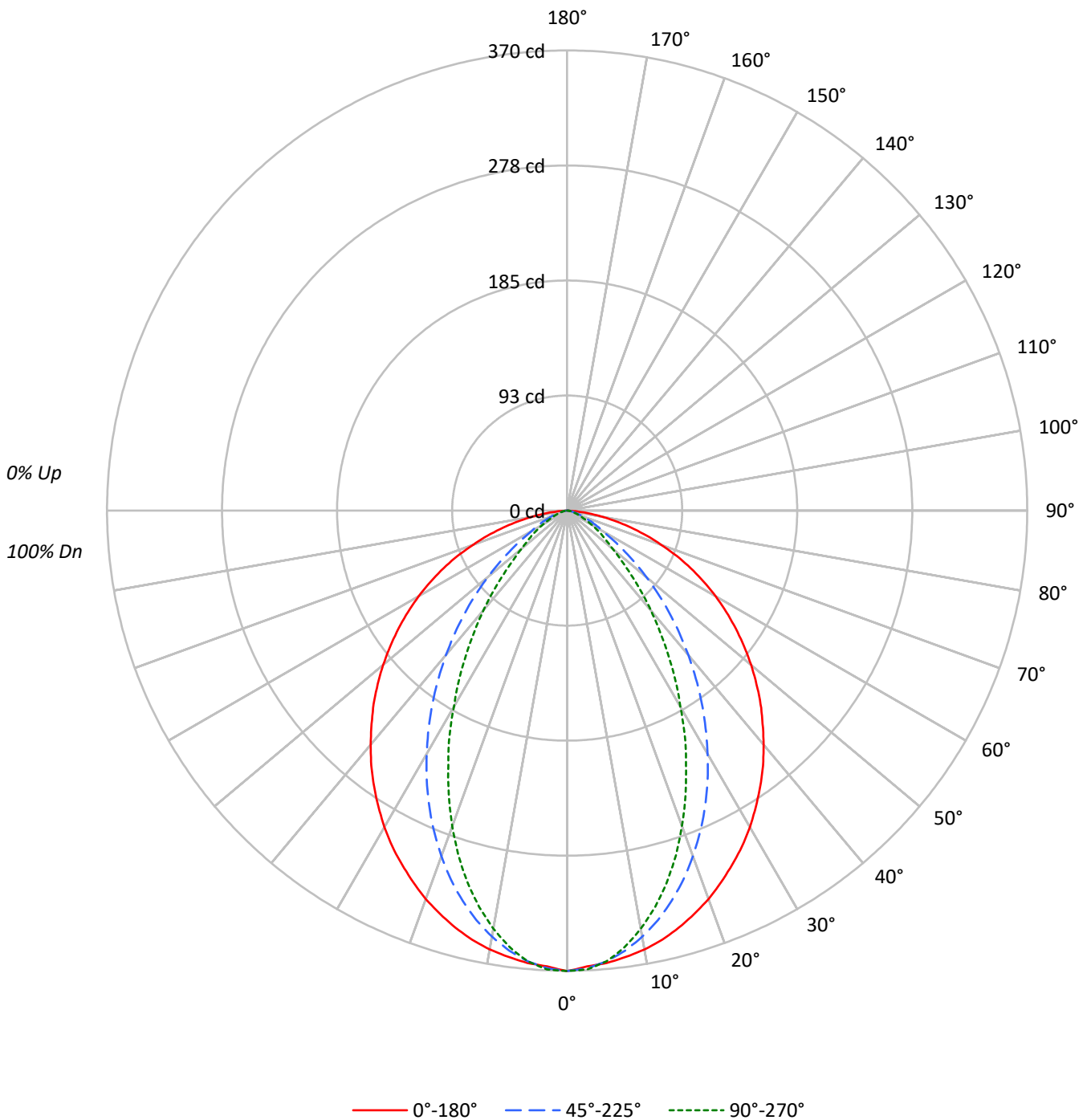
Lumens per Lamp: N/A
Luminaire Lumens: 598.8 lumens
Efficiency: N/A
Efficacy: 47.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3274	3274	3274
5°	3240	3229	3229
10°	3217	3123	3065
15°	3178	2973	2834
20°	3127	2783	2540
25°	3064	2560	2207
30°	2999	2305	1859
35°	2922	2036	1529
40°	2837	1747	1206
45°	2751	1453	902
50°	2656	1143	659
55°	2551	845	526
60°	2438	585	403
65°	2293	454	295
70°	2076	321	233
75°	1814	225	178
80°	1456	173	158
85°	801	142	142

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2751 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.3	5.7
10°-20°	91.8	15.3
20°-30°	122.4	20.4
30°-40°	123.3	20.6
40°-50°	101.1	16.9
50°-60°	69.1	11.5
60°-70°	38.6	6.4
70°-80°	15.3	2.6
80°-90°	2.9	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°	248.5	41.5
0°-40°	371.8	62.1
0°-60°	542.0	90.5
0°-90°	598.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	598.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	370	370	370	370	370	
5°	365	369	364	362	364	35
15°	347	343	325	313	310	98
25°	314	299	262	236	226	145
35°	271	242	189	153	142	169
45°	220	180	116	82	72	170
55°	166	116	55	36	34	148
65°	110	55	22	16	14	108
75°	53	14	7	6	5	57
85°	8	1	1	1	1	11
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	370.3	370.3	370.3	370.3	370.3
2.5°	366.9	371.4	368.3	368.6	369.3
5°	365.1	369.3	363.8	362.0	363.8
7.5°	362.0	365.1	356.9	353.4	354.1
10°	358.3	359.3	347.9	342.0	341.4
12.5°	353.4	352.0	337.2	328.6	326.5
15°	347.2	343.4	324.8	313.4	309.6
17.5°	340.0	333.4	311.0	296.2	290.7
20°	332.4	322.7	295.8	276.9	270.0
22.5°	323.4	311.4	279.6	256.5	248.6
25°	314.1	298.6	262.4	235.8	226.2
27.5°	304.5	285.5	244.5	214.8	205.2
30°	293.8	271.4	225.8	193.8	182.1
32.5°	282.4	256.9	207.2	173.1	162.1
35°	270.7	242.1	188.6	152.7	141.7
37.5°	258.6	226.9	170.0	133.4	122.4
40°	245.8	211.4	151.4	115.2	104.5
42.5°	232.7	195.5	133.4	97.9	87.9
45°	220.0	179.6	116.2	81.7	72.1
47.5°	206.5	163.8	99.3	66.5	58.3
50°	193.1	147.9	83.1	53.4	47.9
52.5°	179.3	132.1	68.3	43.8	40.0
55°	165.5	116.2	54.8	36.5	34.1
57.5°	151.7	100.3	42.4	31.0	28.3
60°	137.9	84.8	33.1	25.2	22.8
62.5°	123.8	69.3	27.2	20.0	17.9
65°	109.6	55.2	21.7	15.5	14.1
67.5°	95.5	42.1	16.6	12.1	11.0
70°	80.3	30.0	12.4	9.3	9.0
72.5°	67.2	20.3	9.0	7.2	6.9
75°	53.1	14.5	6.6	5.5	5.2
77.5°	41.0	9.3	4.8	4.5	4.1
80°	28.6	5.2	3.4	3.1	3.1
82.5°	17.6	2.8	2.4	2.1	2.1
85°	7.9	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	14.84	16.25	15.21	16.56	16.88	5.93	7.34	6.30	7.65	7.97
	3H	16.43	17.68	16.81	18.01	18.37	6.52	7.78	6.90	8.10	8.47
	4H	17.02	18.19	17.43	18.54	18.92	6.68	7.85	7.08	8.20	8.58
	6H	17.46	18.53	17.87	18.90	19.29	6.79	7.86	7.20	8.23	8.62
	8H	17.57	18.59	18.00	18.98	19.38	6.81	7.83	7.24	8.22	8.62
	12H	17.61	18.59	18.04	18.97	19.40	6.82	7.79	7.25	8.18	8.61
4H	2H	14.70	15.87	15.10	16.22	16.60	6.51	7.68	6.91	8.03	8.41
	3H	16.34	17.30	16.76	17.71	18.11	7.23	8.19	7.64	8.59	8.99
	4H	16.95	17.81	17.39	18.23	18.67	7.43	8.29	7.86	8.71	9.15
	6H	17.44	18.18	17.90	18.63	19.09	7.60	8.34	8.06	8.78	9.25
	8H	17.59	18.28	18.05	18.72	19.19	7.63	8.32	8.10	8.77	9.24
	12H	17.66	18.27	18.14	18.75	19.23	7.66	8.27	8.14	8.75	9.23
8H	4H	16.84	17.54	17.31	17.98	18.45	7.70	8.39	8.17	8.84	9.31
	6H	17.33	17.89	17.83	18.39	18.87	7.91	8.47	8.41	8.97	9.45
	8H	17.47	17.98	17.99	18.49	18.98	7.97	8.47	8.48	8.99	9.48
	12H	17.56	18.01	18.07	18.50	19.07	8.03	8.48	8.54	8.97	9.54
12H	4H	16.80	17.42	17.29	17.90	18.37	7.73	8.34	8.21	8.82	9.30
	6H	17.27	17.78	17.79	18.29	18.78	7.93	8.44	8.45	8.96	9.45
	8H	17.44	17.88	17.95	18.38	18.95	8.03	8.48	8.54	8.97	9.54