

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056155

Luminaire Tested: S124R3DR-H350D927-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056155
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-H350D927-X4F0-XX-UDD-FLL-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

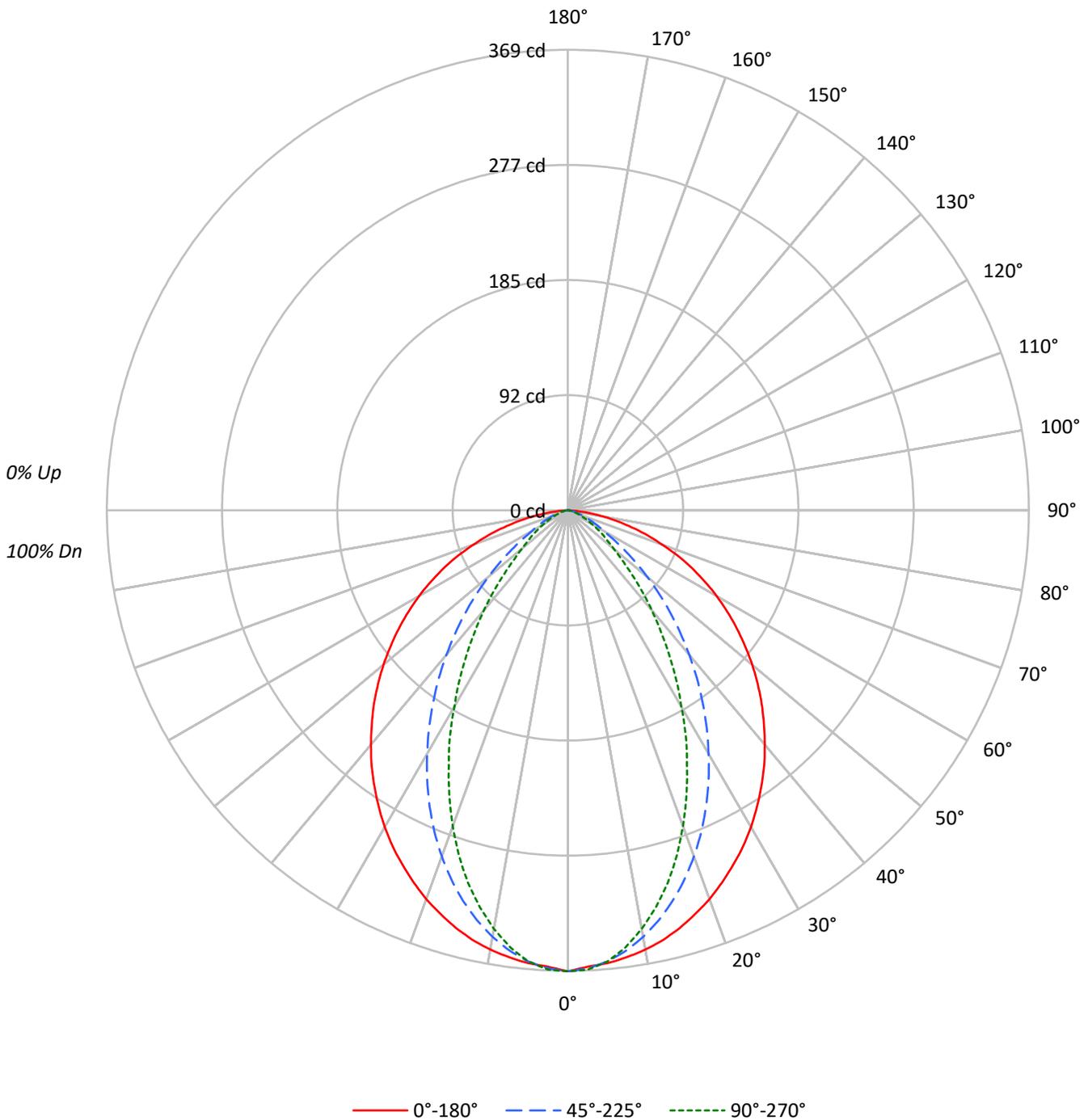
Lumens per Lamp: N/A
Luminaire Lumens: 597.3 lumens
Efficiency: N/A
Efficacy: 51.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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

TEST NUMBER: P1056155

CATALOG NUMBER: S124R3DR-H350D927-X4F0-XX-UDD-FLL-S

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°	3266	3266	3266
5°	3233	3221	3221
10°	3209	3116	3057
15°	3171	2966	2827
20°	3120	2777	2534
25°	3056	2554	2201
30°	2992	2300	1854
35°	2914	2030	1526
40°	2830	1743	1203
45°	2743	1449	899
50°	2649	1140	657
55°	2545	843	526
60°	2433	584	401
65°	2289	454	295
70°	2071	321	230
75°	1811	222	178
80°	1451	173	158
85°	801	142	142

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2743 cd/sqm

TEST NUMBER: P1056155

CATALOG NUMBER: S124R3DR-H350D927-X4F0-XX-UDD-FLL-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.3	5.7
10°-20°	91.6	15.3
20°-30°	122.1	20.4
30°-40°	123.0	20.6
40°-50°	100.8	16.9
50°-60°	68.9	11.5
60°-70°	38.5	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°	247.9	41.5
0°-40°	370.9	62.1
0°-60°	540.7	90.5
0°-90°	597.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	597.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	369	369	369	369	369	
5°	364	368	363	361	363	35
15°	346	343	324	313	309	98
25°	313	298	262	235	226	144
35°	270	242	188	152	141	169
45°	219	179	116	82	72	169
55°	165	116	55	36	34	148
65°	109	55	22	16	14	108
75°	53	14	6	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°	369.4	369.4	369.4	369.4	369.4
2.5°	366.0	370.4	367.3	367.7	368.4
5°	364.3	368.4	362.9	361.2	362.9
7.5°	361.2	364.3	356.0	352.6	353.2
10°	357.4	358.4	347.1	341.2	340.5
12.5°	352.6	351.2	336.4	327.8	325.7
15°	346.4	342.6	324.0	312.7	308.9
17.5°	339.1	332.6	310.3	295.5	290.0
20°	331.6	321.9	295.1	276.2	269.3
22.5°	322.6	310.6	279.0	255.9	248.0
25°	313.3	297.9	261.8	235.3	225.6
27.5°	303.7	284.8	243.9	214.3	204.7
30°	293.1	270.7	225.3	193.3	181.6
32.5°	281.7	256.2	206.7	172.7	161.7
35°	270.0	241.5	188.1	152.4	141.4
37.5°	258.0	226.3	169.6	133.1	122.1
40°	245.2	210.8	151.0	114.9	104.2
42.5°	232.2	195.0	133.1	97.7	87.7
45°	219.4	179.2	115.9	81.5	71.9
47.5°	206.0	163.4	99.1	66.4	58.1
50°	192.6	147.6	82.9	53.3	47.8
52.5°	178.9	131.7	68.1	43.7	39.9
55°	165.1	115.9	54.7	36.5	34.1
57.5°	151.3	100.1	42.3	31.0	28.2
60°	137.6	84.6	33.0	25.1	22.7
62.5°	123.5	69.1	27.2	19.9	17.9
65°	109.4	55.0	21.7	15.5	14.1
67.5°	95.3	42.0	16.5	12.0	11.0
70°	80.1	29.9	12.4	9.3	8.9
72.5°	67.1	20.3	8.9	7.2	6.9
75°	53.0	14.4	6.5	5.5	5.2
77.5°	40.9	9.3	4.8	4.5	4.1
80°	28.5	5.2	3.4	3.1	3.1
82.5°	17.5	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	16.24	15.20	16.56	16.87	5.93	7.34	6.30	7.65	7.97
	3H	16.42	17.67	16.80	18.00	18.37	6.52	7.77	6.90	8.10	8.47
	4H	17.02	18.19	17.42	18.54	18.92	6.68	7.85	7.08	8.20	8.58
	6H	17.45	18.52	17.86	18.89	19.29	6.79	7.86	7.20	8.23	8.62
	8H	17.56	18.58	17.99	18.97	19.38	6.81	7.83	7.24	8.22	8.62
	12H	17.60	18.58	18.04	18.96	19.39	6.82	7.79	7.25	8.18	8.60
4H	2H	14.69	15.86	15.09	16.21	16.59	6.52	7.69	6.92	8.04	8.42
	3H	16.34	17.30	16.75	17.70	18.10	7.23	8.18	7.64	8.59	8.99
	4H	16.94	17.80	17.38	18.22	18.66	7.43	8.29	7.86	8.71	9.15
	6H	17.44	18.18	17.90	18.62	19.09	7.60	8.34	8.06	8.78	9.25
	8H	17.58	18.27	18.04	18.72	19.19	7.63	8.32	8.10	8.77	9.24
	12H	17.65	18.26	18.14	18.75	19.22	7.66	8.27	8.14	8.75	9.23
8H	4H	16.84	17.53	17.30	17.97	18.44	7.70	8.39	8.17	8.84	9.31
	6H	17.32	17.88	17.82	18.38	18.86	7.90	8.47	8.40	8.96	9.44
	8H	17.46	17.97	17.98	18.48	18.97	7.96	8.47	8.48	8.99	9.48
	12H	17.55	18.00	18.07	18.49	19.06	8.03	8.47	8.54	8.97	9.54
12H	4H	16.80	17.41	17.28	17.89	18.37	7.73	8.34	8.21	8.82	9.29
	6H	17.26	17.77	17.78	18.28	18.78	7.93	8.44	8.45	8.95	9.45
	8H	17.43	17.88	17.94	18.37	18.94	8.03	8.48	8.54	8.97	9.54