

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: P1056162

Luminaire Tested: S124R3DR-H350D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056162
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H350D935-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

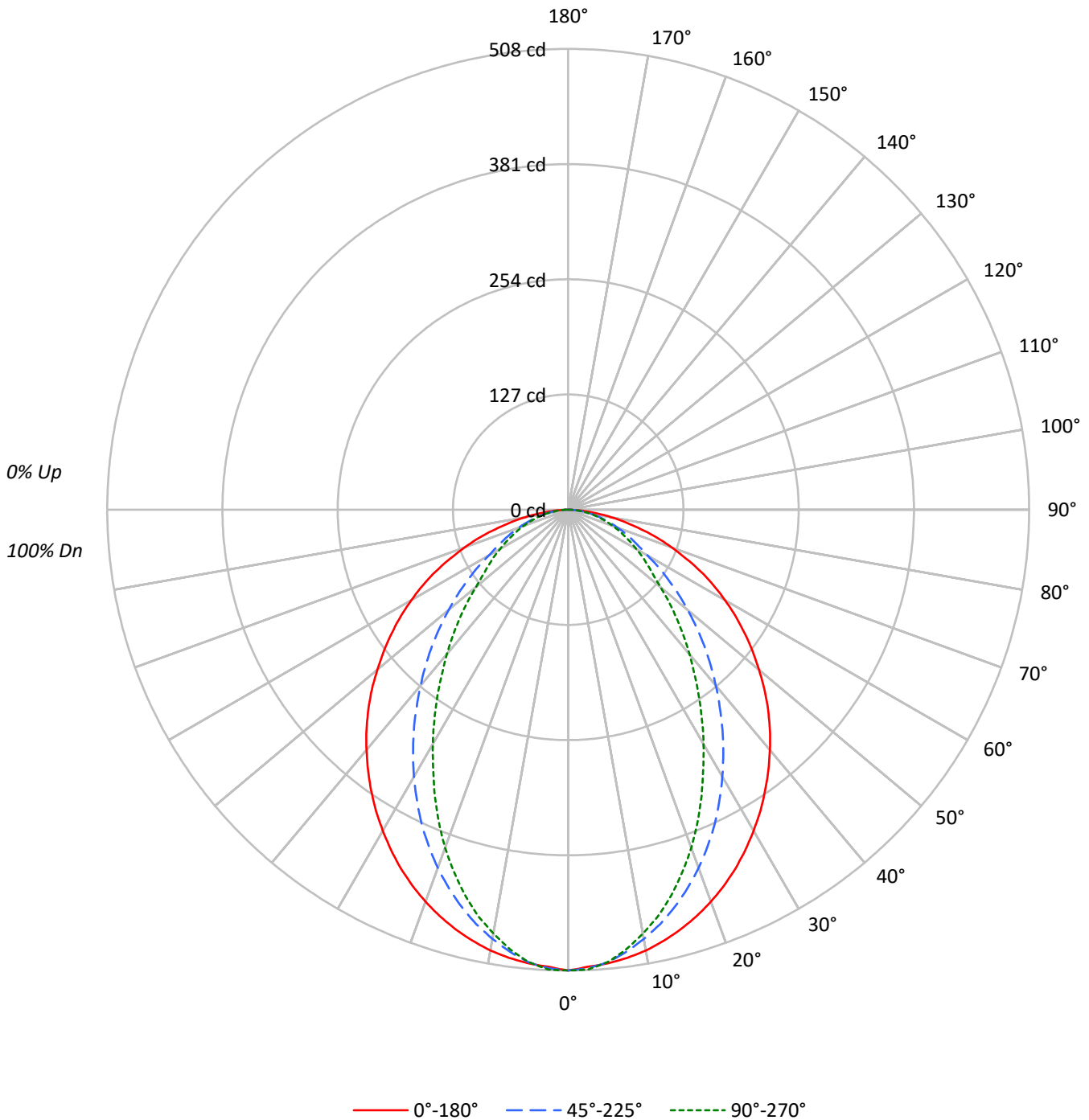
Lumens per Lamp: N/A
Luminaire Lumens: 1011.9 lumens
Efficiency: N/A
Efficacy: 86.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4491	4491	4491
5°	4456	4446	4443
10°	4431	4313	4259
15°	4383	4151	4024
20°	4326	3954	3732
25°	4256	3728	3392
30°	4171	3469	3045
35°	4083	3200	2711
40°	3991	2921	2399
45°	3894	2651	2108
50°	3774	2366	1820
55°	3659	2081	1654
60°	3529	1784	1533
65°	3370	1619	1431
70°	3130	1497	1352
75°	2835	1380	1278
80°	2474	1273	1202
85°	1897	1177	1096

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3894 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.3	4.7
10°-20°	128.3	12.7
20°-30°	177.7	17.6
30°-40°	190.7	18.8
40°-50°	173.4	17.1
50°-60°	136.6	13.5
60°-70°	93.5	9.2
70°-80°	50.3	5.0
80°-90°	14.2	1.4
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°	353.3	34.9
0°-40°	543.9	53.8
0°-60°	853.9	84.4
0°-90°	1011.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1011.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	508	508	508	508	508	
5°	502	508	501	498	501	48
15°	479	474	454	441	440	135
25°	436	418	382	354	348	201
35°	378	349	296	261	251	237
45°	311	272	212	175	169	240
55°	237	192	135	109	107	212
65°	161	115	77	69	68	159
75°	83	50	40	37	37	89
85°	19	13	12	11	11	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	508.0	508.0	508.0	508.0	508.0
2.5°	504.3	510.3	505.8	506.6	507.3
5°	502.1	507.7	500.9	498.3	500.6
7.5°	498.3	502.1	491.6	486.7	489.0
10°	493.5	494.2	480.4	473.3	474.4
12.5°	486.7	484.9	468.0	458.0	458.7
15°	478.9	473.7	453.5	441.1	439.6
17.5°	469.9	461.3	437.4	421.7	418.7
20°	459.8	448.2	420.2	400.0	396.6
22.5°	448.6	433.7	401.5	377.6	372.7
25°	436.3	418.3	382.1	354.4	347.7
27.5°	422.8	401.9	361.1	330.8	322.2
30°	408.6	384.7	339.8	307.3	298.3
32.5°	394.0	367.1	318.1	283.7	274.4
35°	378.3	348.8	296.5	260.6	251.2
37.5°	362.3	329.7	274.4	238.1	228.4
40°	345.8	310.7	253.1	215.7	207.9
42.5°	329.0	291.2	232.2	194.8	187.7
45°	311.4	271.8	212.0	175.3	168.6
47.5°	293.5	252.0	191.4	157.0	150.7
50°	274.4	232.2	172.0	139.1	132.3
52.5°	256.1	212.0	153.3	121.5	118.1
55°	237.4	192.2	135.0	108.8	107.3
57.5°	218.7	172.3	118.1	98.7	97.2
60°	199.6	152.9	100.9	88.2	86.7
62.5°	180.6	133.8	88.2	78.1	77.4
65°	161.1	115.1	77.4	68.8	68.4
67.5°	140.6	97.2	67.7	60.6	60.2
70°	121.1	79.3	57.9	52.3	52.3
72.5°	102.8	62.8	49.0	44.5	44.5
75°	83.0	50.5	40.4	37.0	37.4
77.5°	65.4	39.6	32.5	30.3	30.3
80°	48.6	29.5	25.0	23.2	23.6
82.5°	32.9	20.6	17.9	16.8	16.8
85°	18.7	12.7	11.6	10.8	10.8
87.5°	6.7	6.0	5.6	4.9	5.2
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	16.36	17.88	16.72	18.20	18.51	12.14	13.66	12.50	13.98	14.29
	3H	18.14	19.51	18.51	19.83	20.20	13.75	15.12	14.13	15.45	15.81
	4H	18.81	20.09	19.21	20.44	20.82	14.38	15.67	14.78	16.02	16.39
	6H	19.32	20.51	19.73	20.87	21.26	14.88	16.07	15.29	16.44	16.83
	8H	19.48	20.61	19.91	21.00	21.40	15.05	16.18	15.48	16.57	16.98
	12H	19.58	20.66	20.01	21.05	21.47	15.17	16.26	15.60	16.64	17.07
4H	2H	16.46	17.74	16.85	18.09	18.47	12.86	14.14	13.26	14.49	14.87
	3H	18.40	19.47	18.81	19.87	20.27	14.66	15.73	15.07	16.13	16.53
	4H	19.16	20.12	19.59	20.54	20.97	15.40	16.37	15.83	16.78	17.22
	6H	19.79	20.63	20.25	21.07	21.53	16.02	16.86	16.48	17.30	17.76
	8H	20.01	20.80	20.47	21.24	21.71	16.23	17.02	16.70	17.46	17.93
	12H	20.17	20.87	20.65	21.35	21.82	16.40	17.10	16.88	17.58	18.05
8H	4H	19.21	20.00	19.68	20.44	20.91	15.79	16.58	16.25	17.02	17.49
	6H	19.91	20.56	20.41	21.05	21.53	16.52	17.17	17.02	17.66	18.14
	8H	20.18	20.76	20.69	21.27	21.76	16.81	17.39	17.32	17.90	18.39
	12H	20.40	20.91	20.91	21.41	21.97	17.05	17.57	17.56	18.06	18.63
12H	4H	19.21	19.91	19.69	20.39	20.86	15.85	16.55	16.33	17.03	17.50
	6H	19.91	20.49	20.42	21.00	21.49	16.60	17.19	17.12	17.70	18.19
	8H	20.21	20.73	20.72	21.22	21.79	16.95	17.47	17.46	17.96	18.52