

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: P1056027

Luminaire Tested: S124R3DR-S350D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056027
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-S350D935-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

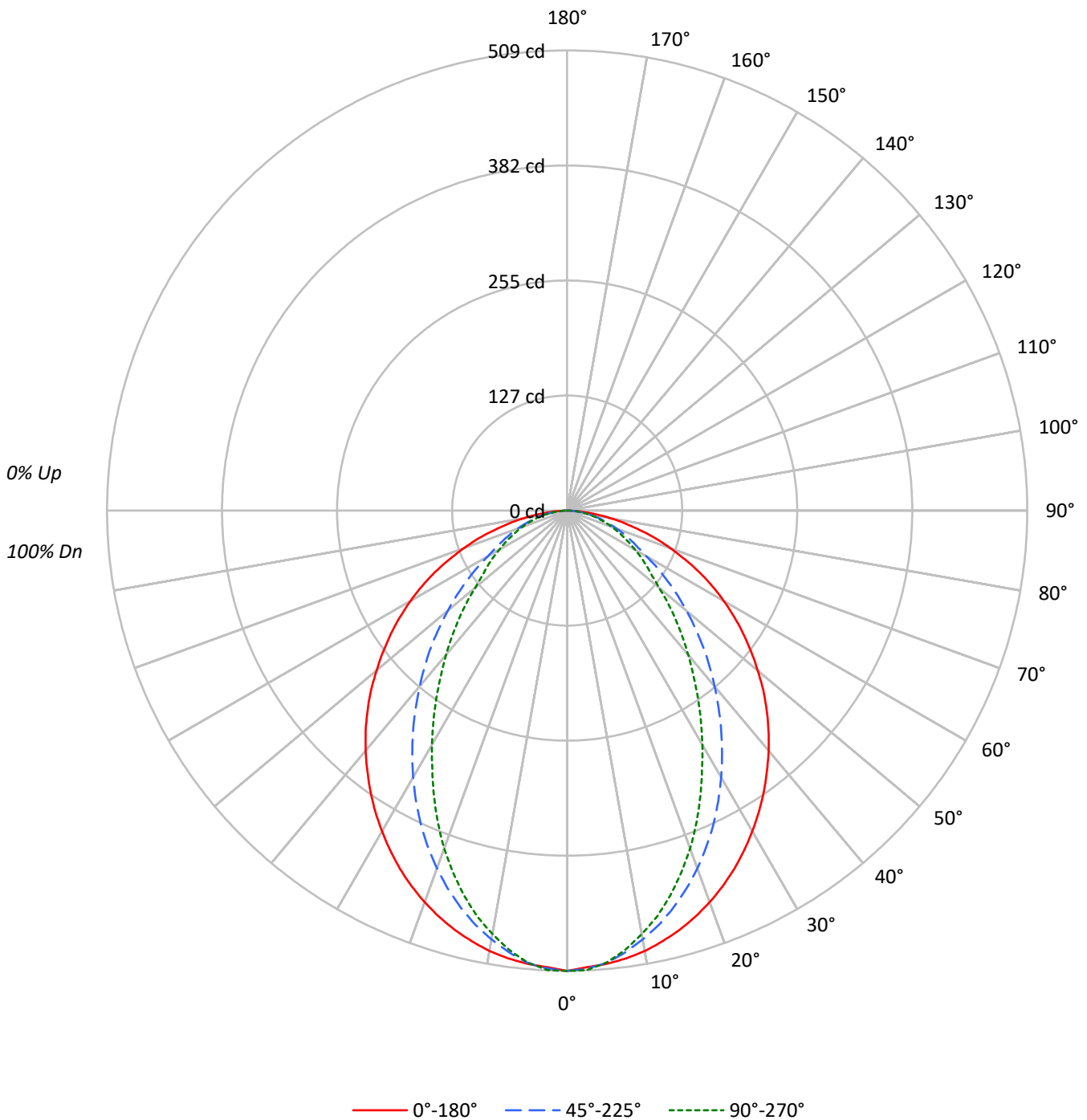
Lumens per Lamp: N/A
Luminaire Lumens: 1014.4 lumens
Efficiency: N/A
Efficacy: 80.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	4503	4503	4503
5°	4467	4457	4454
10°	4441	4324	4270
15°	4394	4161	4034
20°	4337	3963	3741
25°	4266	3736	3400
30°	4182	3478	3054
35°	4094	3208	2718
40°	4001	2928	2405
45°	3904	2657	2113
50°	3784	2371	1825
55°	3669	2086	1659
60°	3538	1789	1537
65°	3379	1623	1435
70°	3138	1502	1357
75°	2842	1383	1281
80°	2480	1278	1202
85°	1897	1177	1106

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3904 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.4	4.7
10°-20°	128.6	12.7
20°-30°	178.1	17.6
30°-40°	191.1	18.8
40°-50°	173.8	17.1
50°-60°	136.9	13.5
60°-70°	93.7	9.2
70°-80°	50.4	5.0
80°-90°	14.3	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°	354.1	34.9
0°-40°	545.3	53.8
0°-60°	856.0	84.4
0°-90°	1014.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1014.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	509	509	509	509	509	
5°	503	509	502	500	502	48
15°	480	475	455	442	441	135
25°	437	419	383	355	348	201
35°	379	350	297	261	252	237
45°	312	272	212	176	169	241
55°	238	193	135	109	108	213
65°	162	115	78	69	69	159
75°	83	51	40	37	38	89
85°	19	13	12	11	11	23
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	509.3	509.3	509.3	509.3	509.3
2.5°	505.5	511.5	507.0	507.8	508.5
5°	503.3	508.9	502.2	499.6	501.8
7.5°	499.6	503.3	492.8	487.9	490.2
10°	494.7	495.4	481.6	474.4	475.6
12.5°	487.9	486.1	469.2	459.1	459.8
15°	480.1	474.8	454.6	442.2	440.7
17.5°	471.1	462.5	438.5	422.7	419.7
20°	461.0	449.3	421.2	401.0	397.6
22.5°	449.7	434.7	402.5	378.5	373.6
25°	437.3	419.4	383.0	355.3	348.5
27.5°	423.9	402.9	362.0	331.7	323.0
30°	409.6	385.6	340.7	308.1	299.1
32.5°	395.0	368.0	318.9	284.4	275.1
35°	379.3	349.6	297.2	261.2	251.8
37.5°	363.1	330.5	275.1	238.7	229.0
40°	346.7	311.4	253.7	216.2	208.4
42.5°	329.8	291.9	232.7	195.2	188.1
45°	312.2	272.4	212.5	175.8	169.0
47.5°	294.2	252.6	191.9	157.4	151.0
50°	275.1	232.7	172.4	139.4	132.7
52.5°	256.7	212.5	153.7	121.8	118.4
55°	238.0	192.6	135.3	109.1	107.6
57.5°	219.2	172.8	118.4	98.9	97.4
60°	200.1	153.3	101.2	88.4	86.9
62.5°	181.0	134.2	88.4	78.3	77.6
65°	161.5	115.4	77.6	69.0	68.6
67.5°	140.9	97.4	67.8	60.7	60.3
70°	121.4	79.4	58.1	52.5	52.5
72.5°	103.1	63.0	49.1	44.6	44.6
75°	83.2	50.6	40.5	37.1	37.5
77.5°	65.6	39.7	32.6	30.4	30.4
80°	48.7	29.6	25.1	23.2	23.6
82.5°	33.0	20.6	18.0	16.9	16.9
85°	18.7	12.7	11.6	10.9	10.9
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	16.37	17.90	16.74	18.21	18.52	12.14	13.67	12.51	13.98	14.30
	3H	18.14	19.51	18.52	19.84	20.20	13.76	15.13	14.13	15.45	15.82
	4H	18.82	20.10	19.22	20.45	20.83	14.39	15.67	14.79	16.02	16.40
	6H	19.33	20.51	19.74	20.88	21.27	14.89	16.08	15.30	16.44	16.84
	8H	19.49	20.62	19.91	21.01	21.41	15.06	16.19	15.49	16.58	16.98
	12H	19.59	20.67	20.02	21.05	21.48	15.18	16.27	15.61	16.65	17.08
4H	2H	16.47	17.75	16.87	18.10	18.48	12.86	14.15	13.26	14.50	14.88
	3H	18.41	19.48	18.82	19.88	20.28	14.67	15.74	15.08	16.14	16.54
	4H	19.17	20.13	19.60	20.54	20.98	15.41	16.37	15.84	16.79	17.23
	6H	19.80	20.64	20.26	21.08	21.54	16.03	16.87	16.48	17.31	17.77
	8H	20.02	20.80	20.48	21.25	21.72	16.24	17.03	16.71	17.47	17.94
	12H	20.17	20.88	20.66	21.35	21.82	16.41	17.11	16.89	17.59	18.06
8H	4H	19.22	20.01	19.69	20.45	20.92	15.80	16.58	16.26	17.03	17.49
	6H	19.92	20.57	20.42	21.06	21.54	16.53	17.18	17.03	17.67	18.15
	8H	20.19	20.77	20.70	21.28	21.77	16.82	17.40	17.33	17.91	18.40
	12H	20.41	20.92	20.92	21.41	21.98	17.07	17.58	17.58	18.07	18.64
12H	4H	19.21	19.92	19.70	20.39	20.86	15.85	16.56	16.34	17.03	17.50
	6H	19.91	20.50	20.43	21.01	21.50	16.61	17.20	17.13	17.71	18.19
	8H	20.22	20.74	20.73	21.23	21.79	16.96	17.48	17.47	17.97	18.53