

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: P1056018

Luminaire Tested: S124R3DR-S350D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056018
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-S350D850-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

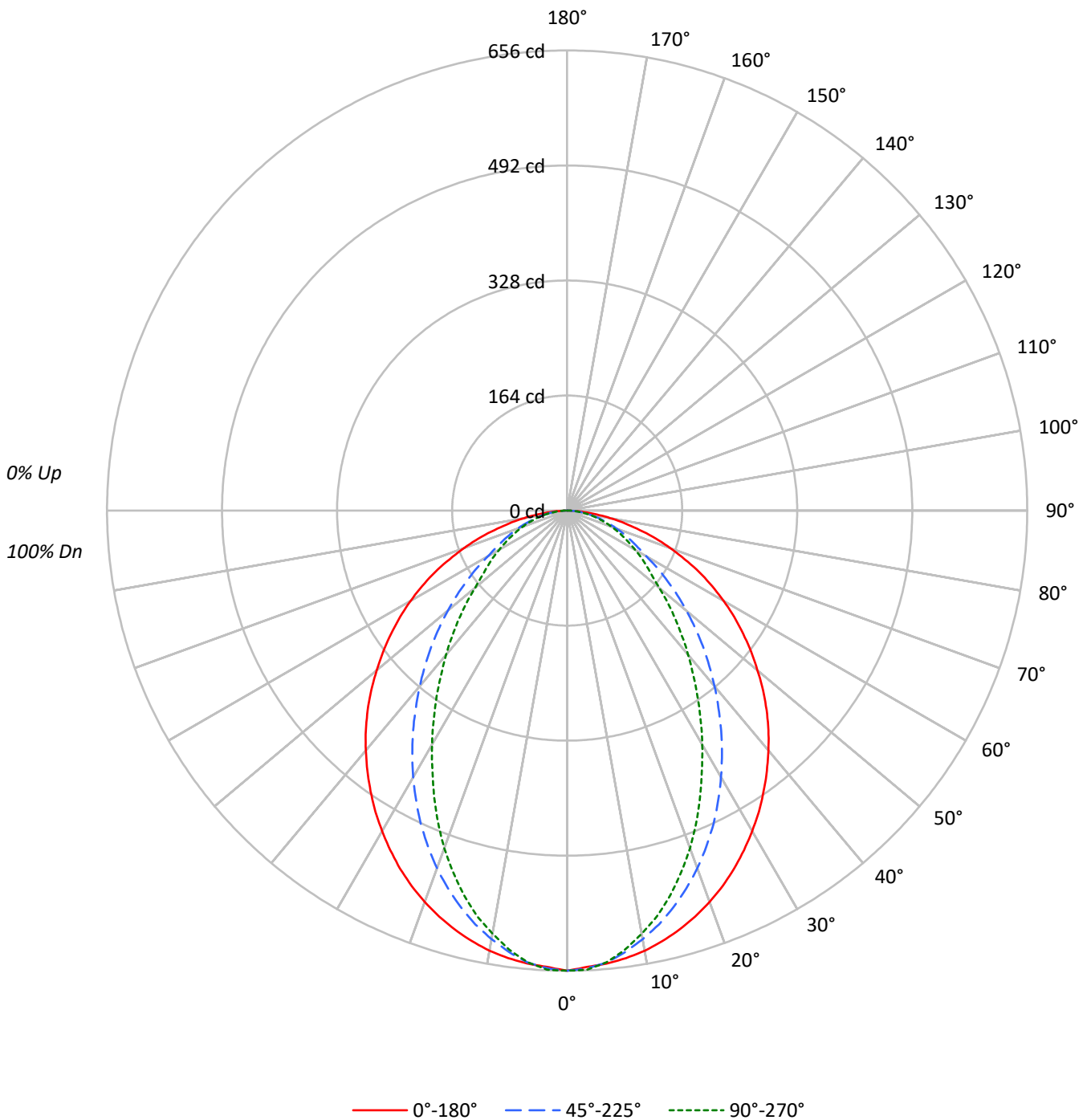
Lumens per Lamp: N/A
Luminaire Lumens: 1306.6 lumens
Efficiency: N/A
Efficacy: 103.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (Ain): 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°	5800	5800	5800
5°	5754	5740	5736
10°	5721	5569	5499
15°	5659	5359	5196
20°	5586	5105	4818
25°	5495	4812	4379
30°	5386	4480	3933
35°	5273	4132	3501
40°	5153	3772	3098
45°	5028	3422	2722
50°	4873	3054	2351
55°	4725	2687	2135
60°	4559	2304	1980
65°	4351	2090	1847
70°	4043	1934	1747
75°	3662	1780	1650
80°	3197	1645	1548
85°	2445	1522	1420

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5028 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	61.1	4.7
10°-20°	165.7	12.7
20°-30°	229.4	17.6
30°-40°	246.2	18.8
40°-50°	223.9	17.1
50°-60°	176.3	13.5
60°-70°	120.7	9.2
70°-80°	65.0	5.0
80°-90°	18.4	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°	456.1	34.9
0°-40°	702.3	53.8
0°-60°	1102.5	84.4
0°-90°	1306.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1306.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	656	656	656	656	656	
5°	648	656	647	643	646	62
15°	618	612	586	570	568	174
25°	563	540	493	458	449	259
35°	488	450	383	336	324	306
45°	402	351	274	226	218	310
55°	306	248	174	140	138	274
65°	208	149	100	89	88	205
75°	107	65	52	48	48	114
85°	24	16	15	14	14	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	656.0	656.0	656.0	656.0	656.0
2.5°	651.2	658.9	653.1	654.1	655.0
5°	648.3	655.5	646.8	643.4	646.3
7.5°	643.4	648.3	634.8	628.5	631.4
10°	637.2	638.1	620.3	611.1	612.5
12.5°	628.5	626.1	604.3	591.3	592.3
15°	618.3	611.6	585.5	569.6	567.7
17.5°	606.8	595.7	564.8	544.5	540.6
20°	593.7	578.8	542.6	516.5	512.1
22.5°	579.2	559.9	518.4	487.5	481.3
25°	563.3	540.1	493.3	457.6	448.9
27.5°	545.9	518.9	466.3	427.2	416.1
30°	527.6	496.7	438.8	396.8	385.2
32.5°	508.8	474.0	410.8	366.4	354.3
35°	488.5	450.4	382.8	336.4	324.4
37.5°	467.7	425.7	354.3	307.5	294.9
40°	446.5	401.1	326.8	278.5	268.4
42.5°	424.8	376.0	299.8	251.5	242.3
45°	402.1	350.9	273.7	226.4	217.7
47.5°	378.9	325.3	247.1	202.7	194.5
50°	354.3	299.8	222.0	179.6	170.9
52.5°	330.7	273.7	197.9	156.9	152.5
55°	306.5	248.1	174.3	140.5	138.5
57.5°	282.4	222.5	152.5	127.4	125.5
60°	257.8	197.4	130.3	113.9	112.0
62.5°	233.1	172.8	113.9	100.9	99.9
65°	208.0	148.7	99.9	88.8	88.3
67.5°	181.5	125.5	87.4	78.2	77.7
70°	156.4	102.3	74.8	67.6	67.6
72.5°	132.7	81.1	63.2	57.4	57.4
75°	107.2	65.2	52.1	47.8	48.3
77.5°	84.5	51.2	42.0	39.1	39.1
80°	62.8	38.1	32.3	29.9	30.4
82.5°	42.5	26.5	23.2	21.7	21.7
85°	24.1	16.4	15.0	14.0	14.0
87.5°	8.7	7.7	7.2	6.3	6.8
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	17.25	18.77	17.61	19.09	19.40	13.03	14.55	13.39	14.86	15.18
	3H	19.02	20.39	19.40	20.72	21.08	14.64	16.01	15.01	16.33	16.70
	4H	19.70	20.98	20.10	21.33	21.71	15.27	16.55	15.67	16.90	17.28
	6H	20.21	21.39	20.62	21.76	22.15	15.77	16.96	16.18	17.32	17.71
	8H	20.37	21.50	20.79	21.89	22.29	15.94	17.07	16.36	17.46	17.86
	12H	20.47	21.55	20.90	21.93	22.36	16.06	17.14	16.49	17.53	17.96
4H	2H	17.34	18.63	17.74	18.98	19.36	13.74	15.03	14.14	15.38	15.76
	3H	19.29	20.36	19.70	20.76	21.16	15.55	16.62	15.96	17.02	17.42
	4H	20.04	21.01	20.48	21.42	21.86	16.29	17.25	16.72	17.67	18.11
	6H	20.68	21.52	21.14	21.96	22.42	16.91	17.74	17.36	18.19	18.65
	8H	20.90	21.68	21.36	22.13	22.60	17.12	17.91	17.58	18.35	18.82
	12H	21.05	21.76	21.54	22.23	22.70	17.29	17.99	17.77	18.47	18.94
8H	4H	20.10	20.89	20.57	21.33	21.80	16.68	17.46	17.14	17.91	18.37
	6H	20.80	21.45	21.30	21.94	22.42	17.41	18.06	17.91	18.55	19.03
	8H	21.07	21.65	21.58	22.16	22.65	17.70	18.28	18.21	18.79	19.28
	12H	21.29	21.80	21.80	22.29	22.86	17.94	18.46	18.45	18.95	19.51
12H	4H	20.09	20.79	20.58	21.27	21.74	16.73	17.43	17.21	17.91	18.38
	6H	20.79	21.38	21.31	21.89	22.38	17.49	18.08	18.00	18.58	19.07
	8H	21.10	21.62	21.61	22.11	22.67	17.84	18.36	18.35	18.85	19.41