

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: P1055566

Luminaire Tested: S123R3DR-S1000D935-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055566
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1000D935-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

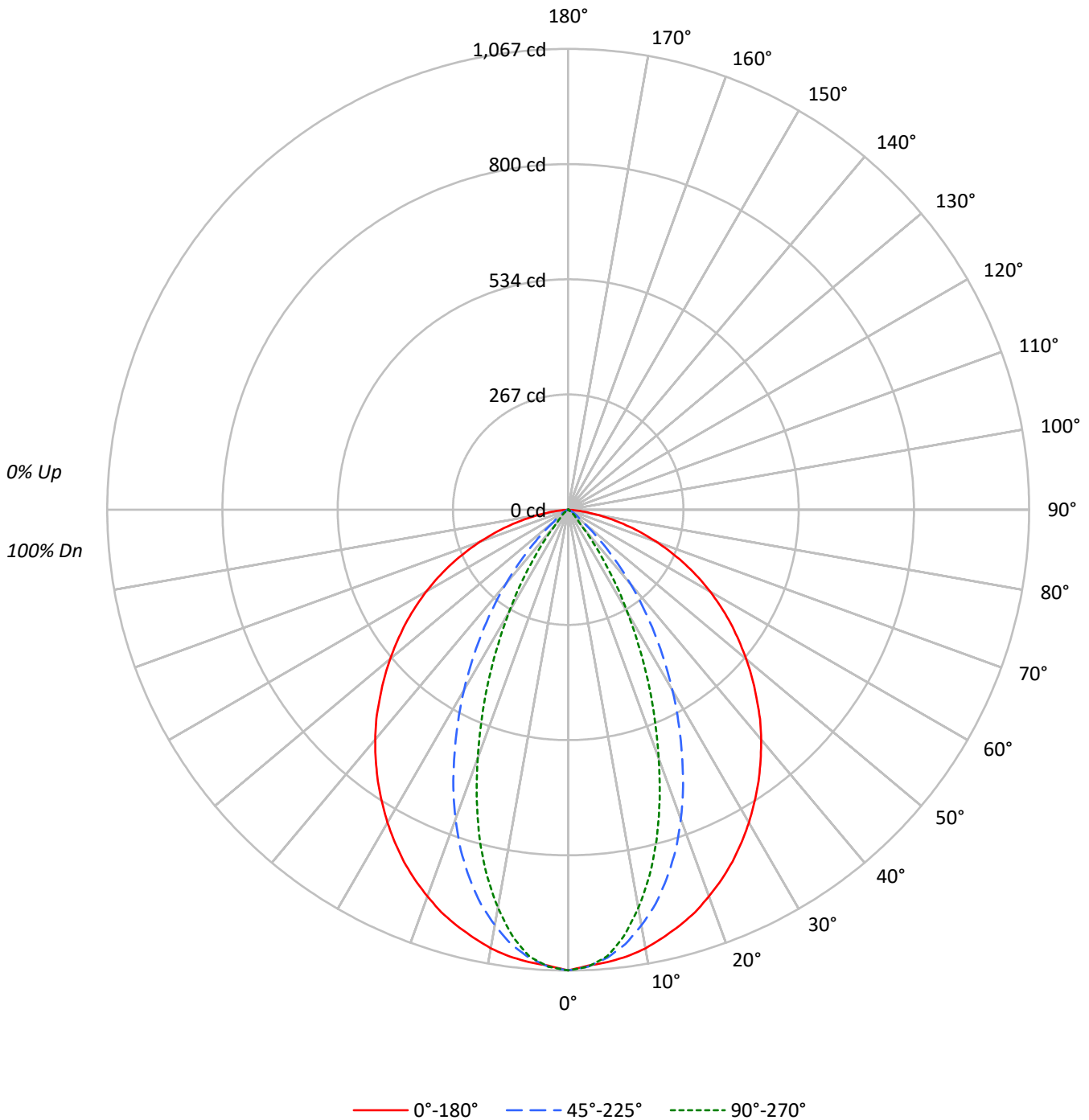
Lumens per Lamp: N/A
Luminaire Lumens: 1248.3 lumens
Efficiency: N/A
Efficacy: 36.0 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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: P1055566

CATALOG NUMBER: S123R3DR-S1000D935-X4F0-XX-UDD-F-B

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	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12859	12859	12859
5°	12721	12601	12560
10°	12624	11961	11459
15°	12443	11020	9874
20°	12222	9780	7865
25°	11966	8286	5799
30°	11645	6716	3805
35°	11302	5113	2084
40°	10935	3535	715
45°	10508	2056	414
50°	10085	810	249
55°	9652	511	116
60°	9151	321	53
65°	8521	157	31
70°	7646	78	39
75°	6494	51	51
80°	4839	76	0
85°	1840	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10508 cd/sqm



TEST NUMBER: P1055566

CATALOG NUMBER: S123R3DR-S1000D935-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.8	7.8
10°-20°	248.2	19.9
20°-30°	296.0	23.7
30°-40°	251.1	20.1
40°-50°	170.7	13.7
50°-60°	105.8	8.5
60°-70°	53.6	4.3
70°-80°	21.8	1.8
80°-90°	3.4	0.3
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°	642.0	51.4
0°-40°	893.1	71.5
0°-60°	1169.6	93.7
0°-90°	1248.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1248.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1067	1067	1067	1067	1067	
5°	1051	1061	1041	1033	1038	100
15°	997	972	883	813	791	281
25°	900	815	623	481	436	414
35°	768	616	347	187	142	480
45°	616	404	121	30	24	476
55°	459	204	24	9	6	410
65°	299	50	6	1	1	295
75°	139	9	1	1	1	148
85°	13	0	0	1	0	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1066.6	1066.6	1066.6	1066.6	1066.6
2.5°	1056.6	1071.0	1058.9	1057.8	1058.9
5°	1051.1	1061.1	1041.2	1033.4	1037.8
7.5°	1043.4	1047.8	1014.6	994.7	994.7
10°	1031.2	1027.9	977.0	943.8	936.0
12.5°	1014.6	1001.3	934.9	882.9	868.6
15°	996.9	971.5	882.9	813.2	791.1
17.5°	977.0	938.3	826.5	735.8	703.7
20°	952.6	900.6	762.3	651.7	613.0
22.5°	927.2	859.7	694.8	565.4	522.2
25°	899.5	815.4	622.9	481.3	435.9
27.5°	868.6	769.0	552.1	400.5	350.7
30°	836.5	720.3	482.4	323.1	273.3
32.5°	802.2	669.4	412.7	252.3	205.8
35°	767.9	616.3	347.4	187.0	141.6
37.5°	731.4	563.2	284.4	129.5	89.6
40°	694.8	511.2	224.6	81.9	45.4
42.5°	657.2	457.0	170.4	40.9	31.0
45°	616.3	403.8	120.6	29.9	24.3
47.5°	577.6	353.0	79.7	24.3	18.8
50°	537.7	302.1	43.2	17.7	13.3
52.5°	497.9	253.4	31.0	13.3	8.9
55°	459.2	203.6	24.3	8.9	5.5
57.5°	419.3	160.4	18.8	5.5	3.3
60°	379.5	118.4	13.3	3.3	2.2
62.5°	339.7	81.9	8.9	2.2	1.1
65°	298.7	49.8	5.5	1.1	1.1
67.5°	256.7	34.3	3.3	1.1	1.1
70°	216.9	24.3	2.2	1.1	1.1
72.5°	177.0	15.5	1.1	1.1	0.0
75°	139.4	8.9	1.1	1.1	1.1
77.5°	102.9	3.3	1.1	1.1	0.0
80°	69.7	1.1	1.1	1.1	0.0
82.5°	38.7	0.0	1.1	1.1	0.0
85°	13.3	0.0	0.0	1.1	0.0
87.5°	0.0	0.0	0.0	1.1	0.0
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	17.92	19.20	18.29	19.51	19.83	0.00	0.00	0.00	0.00	0.00
	3H	19.87	21.00	20.25	21.33	21.70	0.00	0.00	0.00	0.00	0.00
	4H	20.69	21.75	21.10	22.10	22.48	0.00	0.00	0.00	0.00	0.00
	6H	21.25	22.22	21.66	22.59	22.98	0.00	0.00	0.00	0.00	0.00
	8H	21.37	22.29	21.80	22.68	23.09	0.00	0.00	0.00	0.00	0.00
	12H	21.40	22.27	21.83	22.66	23.09	0.00	0.00	0.00	0.00	0.00
4H	2H	17.68	18.74	18.09	19.09	19.47	0.00	0.00	0.00	0.00	0.00
	3H	19.64	20.50	20.05	20.90	21.31	0.00	0.00	0.00	0.00	0.00
	4H	20.45	21.22	20.89	21.64	22.08	0.00	0.00	0.00	0.00	0.00
	6H	21.05	21.71	21.52	22.16	22.63	0.00	0.00	0.00	0.00	0.00
	8H	21.20	21.82	21.67	22.27	22.74	0.00	0.00	0.00	0.00	0.00
	12H	21.25	21.80	21.74	22.28	22.75	0.00	0.00	0.00	0.00	0.00
8H	4H	20.31	20.93	20.78	21.37	21.85	0.00	0.00	0.00	0.00	0.00
	6H	20.89	21.39	21.39	21.89	22.37	0.00	0.00	0.00	0.00	0.00
	8H	21.04	21.49	21.56	22.01	22.50	0.00	0.00	0.00	0.00	0.00
	12H	21.10	21.49	21.61	21.99	22.56	0.00	0.00	0.00	0.00	0.00
12H	4H	20.26	20.80	20.75	21.29	21.76	0.00	0.00	0.00	0.00	0.00
	6H	20.83	21.28	21.35	21.79	22.29	0.00	0.00	0.00	0.00	0.00
	8H	21.00	21.39	21.51	21.89	22.46	0.00	0.00	0.00	0.00	0.00