

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: P1055564

Luminaire Tested: S123R3DR-S1000D930-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055564
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1000D930-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

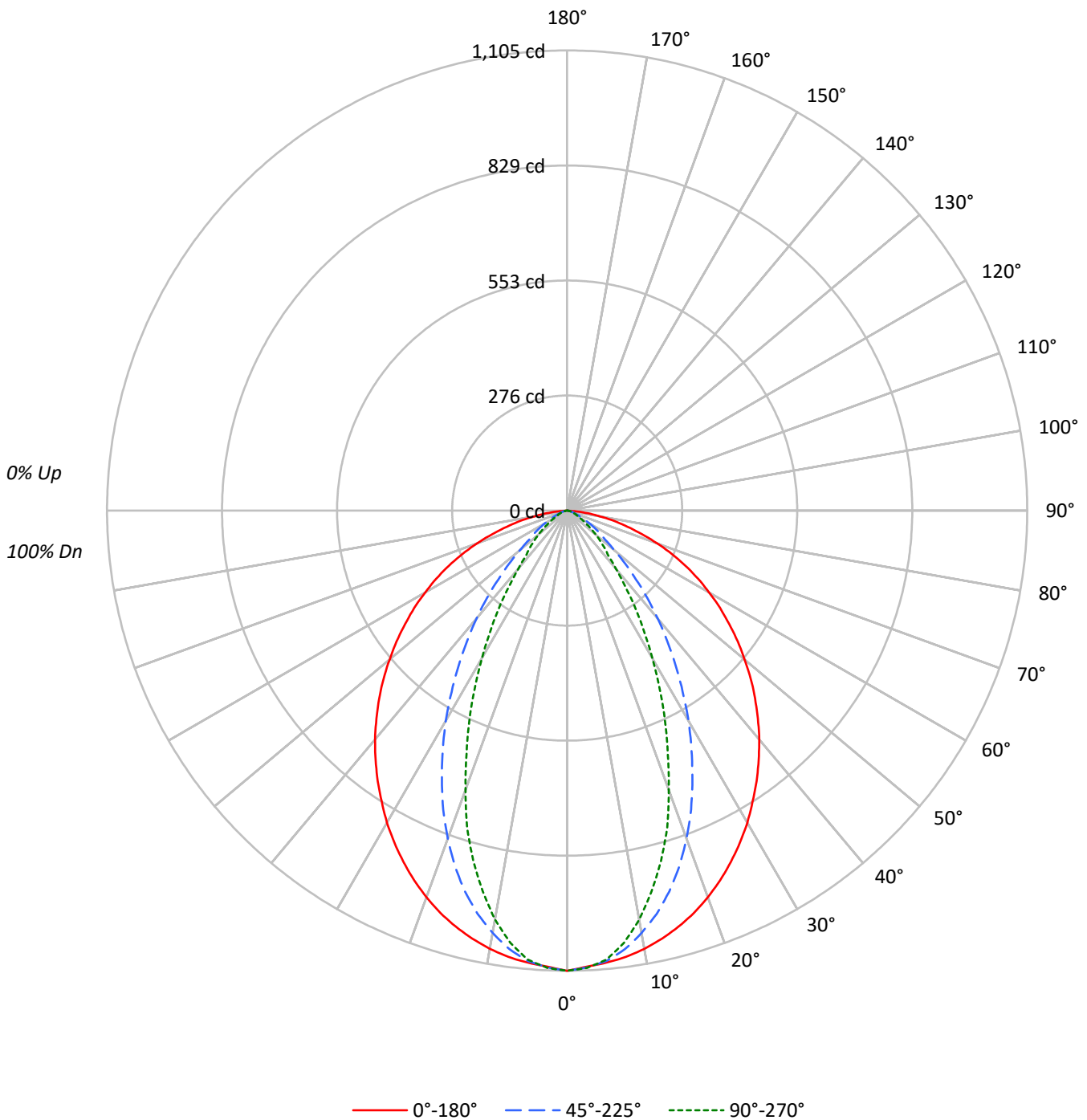
Lumens per Lamp: N/A
Luminaire Lumens: 1537.1 lumens
Efficiency: N/A
Efficacy: 44.3 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13326	13326	13326
5°	13187	13136	13098
10°	13083	12608	12211
15°	12907	11821	10867
20°	12676	10754	9154
25°	12377	9464	7387
30°	12048	8109	5688
35°	11673	6692	4209
40°	11296	5326	2869
45°	10880	3983	2162
50°	10434	2770	1690
55°	9976	2026	1234
60°	9498	1517	885
65°	8938	1016	688
70°	8086	740	553
75°	6978	536	438
80°	5603	437	361
85°	2905	429	290

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10880 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.2	6.6
10°-20°	266.0	17.3
20°-30°	334.2	21.7
30°-40°	311.2	20.2
40°-50°	238.2	15.5
50°-60°	158.4	10.3
60°-70°	85.4	5.6
70°-80°	35.0	2.3
80°-90°	6.7	0.4
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°	702.3	45.7
0°-40°	1013.5	65.9
0°-60°	1410.1	91.7
0°-90°	1537.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1537.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1105	1105	1105	1105	1105	
5°	1090	1101	1085	1081	1082	103
15°	1034	1017	947	892	871	291
25°	930	868	711	593	555	428
35°	793	676	455	322	286	496
45°	638	472	234	137	127	492
55°	475	274	96	67	59	425
65°	313	106	36	26	24	310
75°	150	25	12	10	9	160
85°	21	3	3	3	2	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1105.3	1105.3	1105.3	1105.3	1105.3
2.5°	1095.9	1109.5	1098.0	1099.0	1099.0
5°	1089.6	1101.1	1085.4	1081.2	1082.3
7.5°	1081.2	1088.6	1062.4	1048.8	1046.7
10°	1068.7	1070.8	1029.9	1005.8	997.4
12.5°	1052.9	1045.6	992.2	952.4	936.7
15°	1034.1	1017.3	947.1	891.6	870.6
17.5°	1013.1	984.8	895.8	823.5	798.4
20°	988.0	948.2	838.2	748.1	713.5
22.5°	960.7	909.4	777.4	670.5	631.8
25°	930.4	867.5	711.4	593.0	555.3
27.5°	898.9	822.5	646.4	519.7	480.9
30°	865.4	776.4	582.5	448.4	408.6
32.5°	828.7	726.1	516.5	382.4	342.6
35°	793.1	675.8	454.7	321.6	286.0
37.5°	755.4	625.5	395.0	268.2	228.4
40°	717.7	574.1	338.4	215.8	182.3
42.5°	677.9	522.8	285.0	171.8	145.6
45°	638.1	471.5	233.6	137.2	126.8
47.5°	598.2	420.1	188.6	118.4	107.9
50°	556.3	370.9	147.7	100.6	90.1
52.5°	516.5	321.6	115.2	82.8	73.3
55°	474.6	274.5	96.4	67.1	58.7
57.5°	435.8	226.3	79.6	52.4	46.1
60°	393.9	183.3	62.9	40.9	36.7
62.5°	354.1	143.5	48.2	32.5	29.3
65°	313.3	105.8	35.6	26.2	24.1
67.5°	272.4	76.5	27.2	21.0	19.9
70°	229.4	57.6	21.0	16.8	15.7
72.5°	188.6	40.9	15.7	13.6	12.6
75°	149.8	25.1	11.5	10.5	9.4
77.5°	115.2	14.7	8.4	8.4	7.3
80°	80.7	8.4	6.3	6.3	5.2
82.5°	49.2	5.2	4.2	4.2	4.2
85°	21.0	3.1	3.1	3.1	2.1
87.5°	3.1	1.0	1.0	1.0	1.0
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	18.81	20.17	19.17	20.48	20.79	7.39	8.74	7.75	9.06	9.37
	3H	20.56	21.77	20.94	22.10	22.46	8.05	9.26	8.43	9.58	9.95
	4H	21.26	22.39	21.67	22.74	23.12	8.25	9.37	8.65	9.72	10.10
	6H	21.78	22.81	22.19	23.18	23.57	8.37	9.40	8.78	9.77	10.16
	8H	21.92	22.90	22.35	23.29	23.69	8.40	9.38	8.83	9.77	10.17
	12H	21.97	22.90	22.40	23.29	23.72	8.41	9.35	8.84	9.73	10.16
4H	2H	18.62	19.74	19.02	20.09	20.48	7.94	9.07	8.34	9.42	9.80
	3H	20.41	21.33	20.82	21.73	22.14	8.74	9.66	9.15	10.07	10.47
	4H	21.11	21.93	21.54	22.35	22.79	9.00	9.82	9.43	10.24	10.68
	6H	21.68	22.39	22.14	22.83	23.30	9.20	9.91	9.66	10.35	10.82
	8H	21.85	22.51	22.32	22.96	23.43	9.25	9.91	9.72	10.36	10.83
	12H	21.94	22.52	22.42	23.01	23.48	9.28	9.87	9.77	10.35	10.82
8H	4H	20.98	21.65	21.45	22.09	22.56	9.31	9.98	9.78	10.42	10.89
	6H	21.54	22.08	22.04	22.57	23.05	9.56	10.10	10.06	10.60	11.08
	8H	21.71	22.20	22.23	22.71	23.20	9.65	10.13	10.17	10.65	11.14
	12H	21.82	22.24	22.33	22.74	23.31	9.73	10.16	10.24	10.65	11.22
12H	4H	20.94	21.53	21.42	22.01	22.48	9.36	9.94	9.84	10.43	10.90
	6H	21.48	21.96	22.00	22.48	22.97	9.61	10.09	10.13	10.61	11.10
	8H	21.67	22.10	22.19	22.60	23.17	9.73	10.16	10.25	10.66	11.23