

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: P1055695

Luminaire Tested: S123R3DR-H1000D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055695
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-H1000D927-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

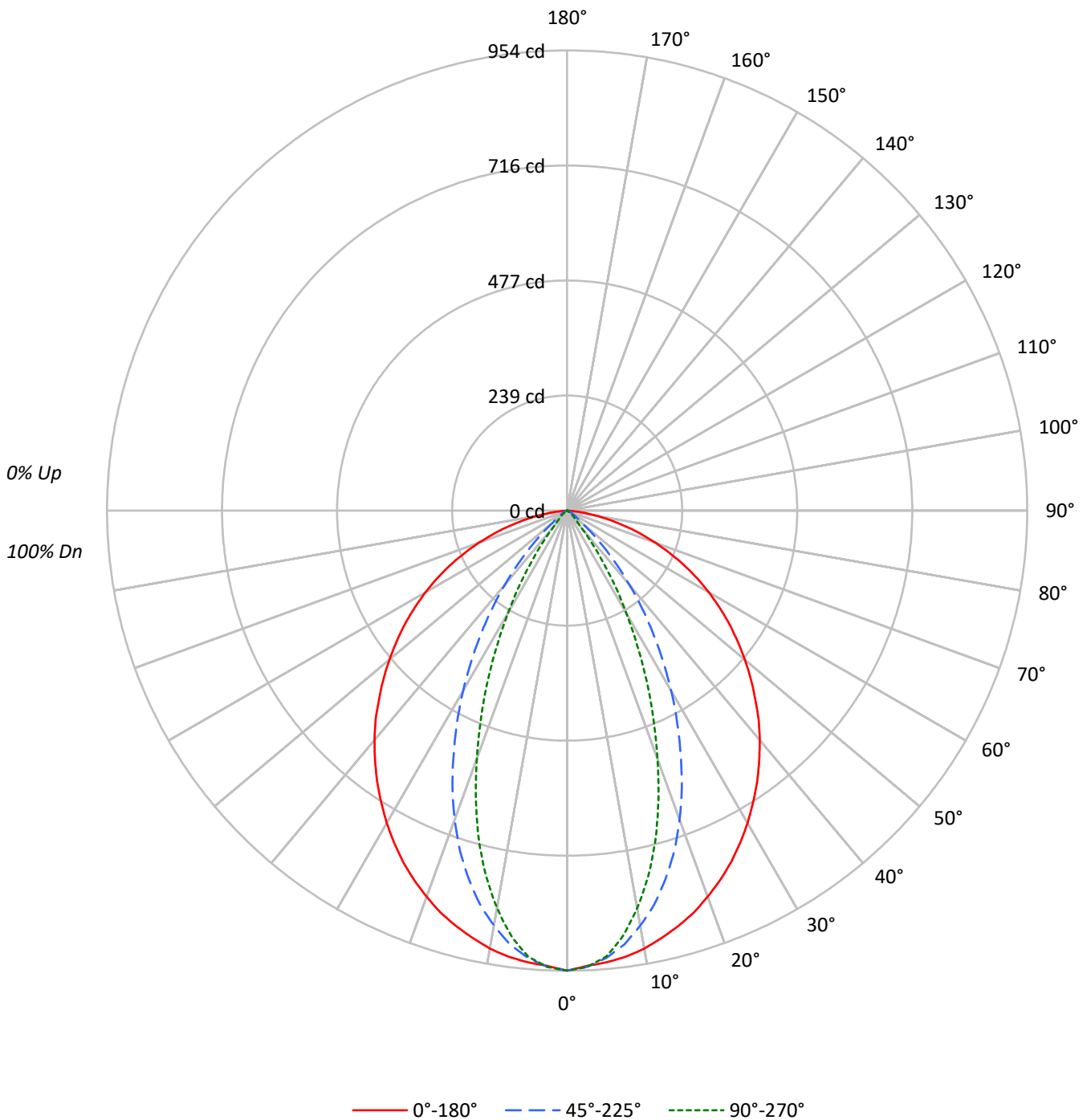
Lumens per Lamp: N/A
Luminaire Lumens: 1116.2 lumens
Efficiency: N/A
Efficacy: 36.1 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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

TEST NUMBER: P1055695

CATALOG NUMBER: S123R3DR-H1000D927-X4F0-XX-UDD-F-B

Luminous Intensity Polar Plot





TEST NUMBER: P1055695

CATALOG NUMBER: S123R3DR-H1000D927-X4F0-XX-UDD-F-B

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	57	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°	11498	11498	11498
5°	11374	11266	11231
10°	11287	10695	10247
15°	11126	9854	8830
20°	10929	8745	7032
25°	10699	7410	5185
30°	10412	6004	3402
35°	10105	4571	1863
40°	9778	3160	639
45°	9395	1838	372
50°	9018	724	223
55°	8631	458	103
60°	8181	287	48
65°	7620	140	29
70°	6835	71	35
75°	5809	47	47
80°	4325	69	0
85°	1646	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9395 cd/sqm



TEST NUMBER: P1055695

CATALOG NUMBER: S123R3DR-H1000D927-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.4	7.8
10°-20°	221.9	19.9
20°-30°	264.7	23.7
30°-40°	224.5	20.1
40°-50°	152.6	13.7
50°-60°	94.6	8.5
60°-70°	47.9	4.3
70°-80°	19.6	1.8
80°-90°	3.0	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°	574.0	51.4
0°-40°	798.5	71.5
0°-60°	1045.7	93.7
0°-90°	1116.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1116.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	954	954	954	954	954	
5°	940	949	931	924	928	89
15°	891	869	790	727	707	251
25°	804	729	557	430	390	370
35°	687	551	311	167	127	429
45°	551	361	108	27	22	426
55°	411	182	22	8	5	367
65°	267	44	5	1	1	264
75°	125	8	1	1	1	133
85°	12	0	0	1	0	21
90°	0	0	0	0	0	



TEST NUMBER: P1055695

CATALOG NUMBER: S123R3DR-H1000D927-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	953.7	953.7	953.7	953.7	953.7
2.5°	944.8	957.7	946.8	945.8	946.8
5°	939.8	948.7	930.9	924.0	928.0
7.5°	932.9	936.9	907.2	889.4	889.4
10°	922.0	919.1	873.6	843.9	837.0
12.5°	907.2	895.3	836.0	789.5	776.6
15°	891.4	868.6	789.5	727.1	707.4
17.5°	873.6	838.9	739.0	657.9	629.2
20°	851.8	805.3	681.6	582.7	548.1
22.5°	829.0	768.7	621.3	505.5	467.0
25°	804.3	729.1	557.0	430.3	389.8
27.5°	776.6	687.6	493.7	358.1	313.6
30°	747.9	644.0	431.3	288.9	244.4
32.5°	717.2	598.5	369.0	225.6	184.0
35°	686.6	551.0	310.6	167.2	126.6
37.5°	653.9	503.6	254.3	115.7	80.1
40°	621.3	457.1	200.8	73.2	40.6
42.5°	587.6	408.6	152.4	36.6	27.7
45°	551.0	361.1	107.8	26.7	21.8
47.5°	516.4	315.6	71.2	21.8	16.8
50°	480.8	270.1	38.6	15.8	11.9
52.5°	445.2	226.6	27.7	11.9	7.9
55°	410.6	182.0	21.8	7.9	4.9
57.5°	374.9	143.4	16.8	4.9	3.0
60°	339.3	105.9	11.9	3.0	2.0
62.5°	303.7	73.2	7.9	2.0	1.0
65°	267.1	44.5	4.9	1.0	1.0
67.5°	229.5	30.7	3.0	1.0	1.0
70°	193.9	21.8	2.0	1.0	1.0
72.5°	158.3	13.9	1.0	1.0	0.0
75°	124.7	7.9	1.0	1.0	1.0
77.5°	92.0	3.0	1.0	1.0	0.0
80°	62.3	1.0	1.0	1.0	0.0
82.5°	34.6	0.0	1.0	1.0	0.0
85°	11.9	0.0	0.0	1.0	0.0
87.5°	0.0	0.0	0.0	1.0	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055695
 CATALOG NUMBER: S123R3DR-H1000D927-X4F0-XX-UDD-F-B

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	17.53	18.81	17.90	19.12	19.44	0.00	0.00	0.00	0.00	0.00
	3H	19.48	20.61	19.86	20.94	21.31	0.00	0.00	0.00	0.00	0.00
	4H	20.30	21.36	20.71	21.71	22.10	0.00	0.00	0.00	0.00	0.00
	6H	20.86	21.83	21.27	22.20	22.59	0.00	0.00	0.00	0.00	0.00
	8H	20.98	21.90	21.42	22.29	22.70	0.00	0.00	0.00	0.00	0.00
	12H	21.01	21.88	21.44	22.27	22.70	0.00	0.00	0.00	0.00	0.00
4H	2H	17.29	18.35	17.70	18.70	19.09	0.00	0.00	0.00	0.00	0.00
	3H	19.25	20.11	19.66	20.52	20.92	0.00	0.00	0.00	0.00	0.00
	4H	20.06	20.83	20.50	21.25	21.70	0.00	0.00	0.00	0.00	0.00
	6H	20.66	21.33	21.13	21.77	22.24	0.00	0.00	0.00	0.00	0.00
	8H	20.82	21.43	21.29	21.88	22.35	0.00	0.00	0.00	0.00	0.00
	12H	20.86	21.41	21.35	21.89	22.37	0.00	0.00	0.00	0.00	0.00
8H	4H	19.92	20.54	20.39	20.99	21.46	0.00	0.00	0.00	0.00	0.00
	6H	20.50	21.00	21.01	21.50	21.98	0.00	0.00	0.00	0.00	0.00
	8H	20.65	21.10	21.18	21.62	22.11	0.00	0.00	0.00	0.00	0.00
	12H	20.71	21.10	21.23	21.60	22.17	0.00	0.00	0.00	0.00	0.00
12H	4H	19.87	20.42	20.36	20.90	21.37	0.00	0.00	0.00	0.00	0.00
	6H	20.44	20.89	20.96	21.41	21.90	0.00	0.00	0.00	0.00	0.00
	8H	20.61	21.00	21.12	21.50	22.07	0.00	0.00	0.00	0.00	0.00