

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059526

Luminaire Tested: S123RDR-H1165D927-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059526
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D927-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

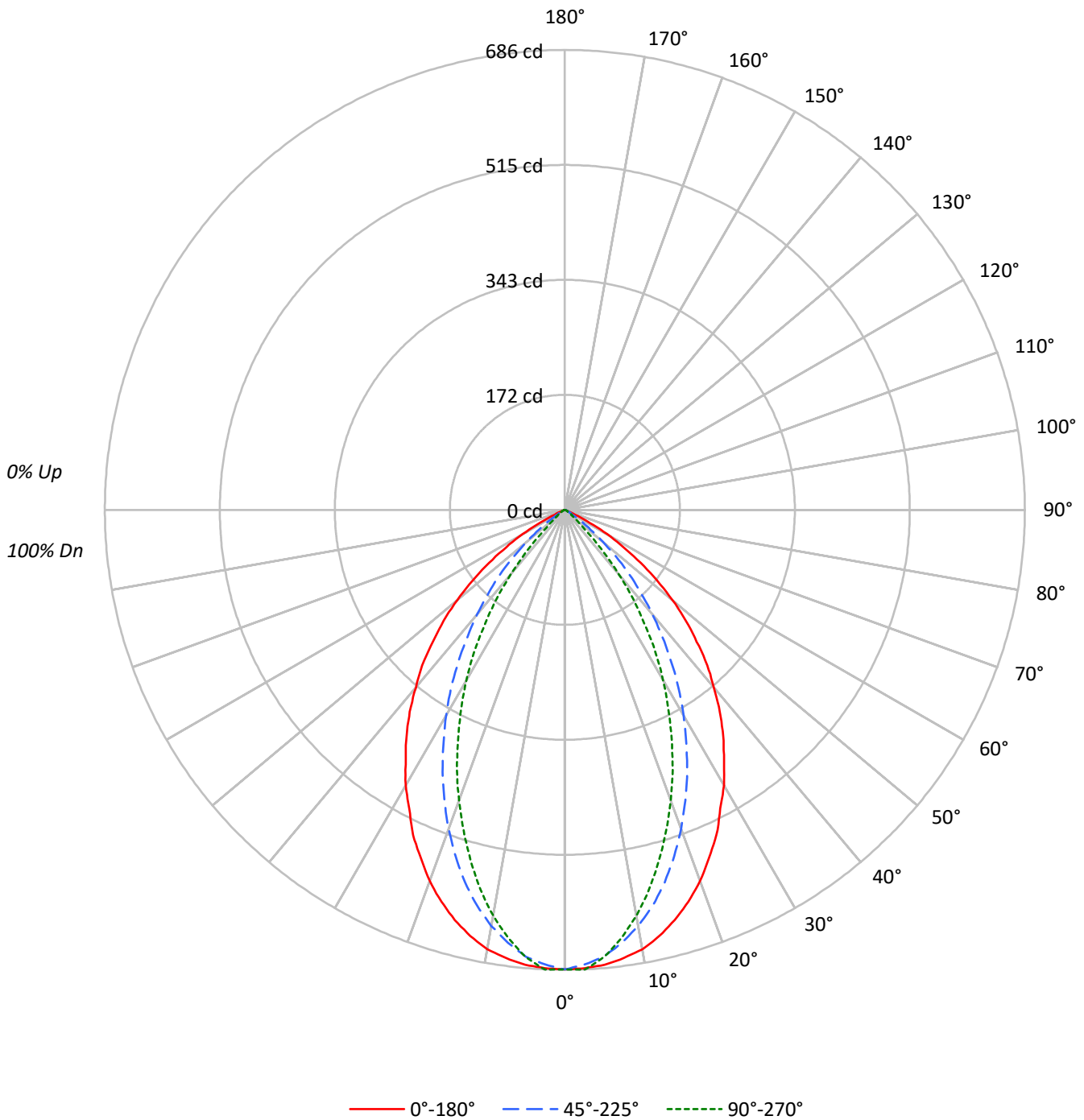
Lumens per Lamp: N/A
Luminaire Lumens: 782.1 lumens
Efficiency: N/A
Efficacy: 21.4 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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: P1059526

CATALOG NUMBER: S123RDR-H1165D927-X4F0-XX-UDD-BVL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1059526

CATALOG NUMBER: S123RDR-H1165D927-X4F0-XX-UDD-BVL-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	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100	100	100
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92	92	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84	84	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76	76	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69	69	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63	63	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58	58	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53	53	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49	49	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46	46	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42	42	42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8048	8048	8048
5°	8027	7883	7896
10°	7935	7514	7331
15°	7701	6990	6588
20°	7365	6330	5764
25°	6936	5591	4877
30°	6435	4804	3981
35°	5902	3971	2959
40°	5296	3113	1895
45°	4618	2273	789
50°	3831	1350	303
55°	2825	565	225
60°	1710	207	129
65°	461	122	61
70°	0	38	38
75°	0	0	50
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4618 cd/sqm



TEST NUMBER: P1059526

CATALOG NUMBER: S123RDR-H1165D927-X4F0-XX-UDD-BVL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.1	8.1
10°-20°	162.8	20.8
20°-30°	202.9	25.9
30°-40°	181.5	23.2
40°-50°	114.5	14.6
50°-60°	47.9	6.1
60°-70°	9.0	1.2
70°-80°	0.3	0.0
80°-90°	0.0	0.0
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°	428.9	54.8
0°-40°	610.3	78.0
0°-60°	772.8	98.8
0°-90°	782.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	782.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	685	685	685	685	685	
5°	681	680	669	671	670	64
15°	634	618	575	551	542	178
25°	535	492	432	394	376	245
35°	412	352	277	227	206	256
45°	278	216	137	73	48	214
55°	138	95	28	11	11	124
65°	17	12	4	2	2	23
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P1059526

CATALOG NUMBER: S123RDR-H1165D927-X4F0-XX-UDD-BVL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	685.4	685.4	685.4	685.4	685.4
2.5°	684.3	685.4	678.8	685.4	686.5
5°	681.0	679.9	668.8	671.0	669.9
7.5°	674.4	671.0	651.2	646.8	644.6
10°	665.5	656.7	630.2	619.2	614.8
12.5°	651.2	639.0	604.8	587.2	580.5
15°	633.5	618.1	575.0	550.7	541.9
17.5°	612.6	590.5	541.9	515.4	502.2
20°	589.4	558.5	506.6	474.6	461.3
22.5°	561.8	527.6	469.1	434.9	420.5
25°	535.3	492.2	431.5	394.0	376.4
27.5°	502.2	456.9	391.8	353.2	334.4
30°	474.6	422.7	354.3	311.2	293.6
32.5°	441.5	387.4	315.7	268.2	251.6
35°	411.7	352.1	277.0	227.4	206.4
37.5°	379.7	317.9	238.4	186.5	166.7
40°	345.5	283.7	203.1	145.7	123.6
42.5°	314.6	249.4	167.8	108.2	86.1
45°	278.1	216.3	136.9	72.8	47.5
47.5°	245.0	185.4	103.7	40.8	25.4
50°	209.7	153.4	73.9	21.0	16.6
52.5°	173.3	122.5	48.6	14.3	13.2
55°	138.0	94.9	27.6	11.0	11.0
57.5°	103.7	68.4	14.3	8.8	7.7
60°	72.8	45.3	8.8	6.6	5.5
62.5°	41.9	26.5	6.6	4.4	4.4
65°	16.6	12.1	4.4	2.2	2.2
67.5°	1.1	3.3	2.2	1.1	1.1
70°	0.0	0.0	1.1	1.1	1.1
72.5°	0.0	0.0	1.1	1.1	1.1
75°	0.0	0.0	0.0	0.0	1.1
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059526
 CATALOG NUMBER: S123RDR-H1165D927-X4F0-XX-UDD-BVL-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	12.43	13.61	12.80	13.92	14.24	0.00	0.00	0.00	0.00	0.00
	3H	12.27	13.31	12.66	13.64	14.00	0.00	0.00	0.00	0.00	0.00
	4H	12.19	13.14	12.59	13.49	13.88	0.00	0.00	0.00	0.00	0.00
	6H	12.10	12.97	12.51	13.34	13.74	0.00	0.00	0.00	0.00	0.00
	8H	12.05	12.87	12.48	13.26	13.67	0.00	0.00	0.00	0.00	0.00
	12H	11.99	12.78	12.43	13.16	13.59	0.00	0.00	0.00	0.00	0.00
4H	2H	12.19	13.15	12.60	13.50	13.89	0.00	0.00	0.00	0.00	0.00
	3H	12.03	12.80	12.44	13.20	13.61	0.00	0.00	0.00	0.00	0.00
	4H	11.92	12.60	12.36	13.03	13.47	0.00	0.00	0.00	0.00	0.00
	6H	11.83	12.41	12.29	12.86	13.33	0.00	0.00	0.00	0.00	0.00
	8H	11.76	12.31	12.23	12.76	13.23	0.00	0.00	0.00	0.00	0.00
	12H	11.70	12.18	12.19	12.67	13.14	0.00	0.00	0.00	0.00	0.00
8H	4H	11.76	12.31	12.23	12.76	13.23	0.00	0.00	0.00	0.00	0.00
	6H	11.64	12.09	12.15	12.59	13.07	0.00	0.00	0.00	0.00	0.00
	8H	11.57	11.97	12.10	12.49	12.98	0.00	0.00	0.00	0.00	0.00
	12H	11.52	11.87	12.04	12.37	12.94	0.00	0.00	0.00	0.00	0.00
12H	4H	11.70	12.18	12.19	12.67	13.14	0.00	0.00	0.00	0.00	0.00
	6H	11.57	11.97	12.10	12.49	12.98	0.00	0.00	0.00	0.00	0.00
	8H	11.52	11.87	12.04	12.37	12.94	0.00	0.00	0.00	0.00	0.00