

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: P1058286

Luminaire Tested: S122RDR-H290D835-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058286
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-57)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H290D835-X4F0-XX-UDD-BVL-W
Description: DEFINE 2 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

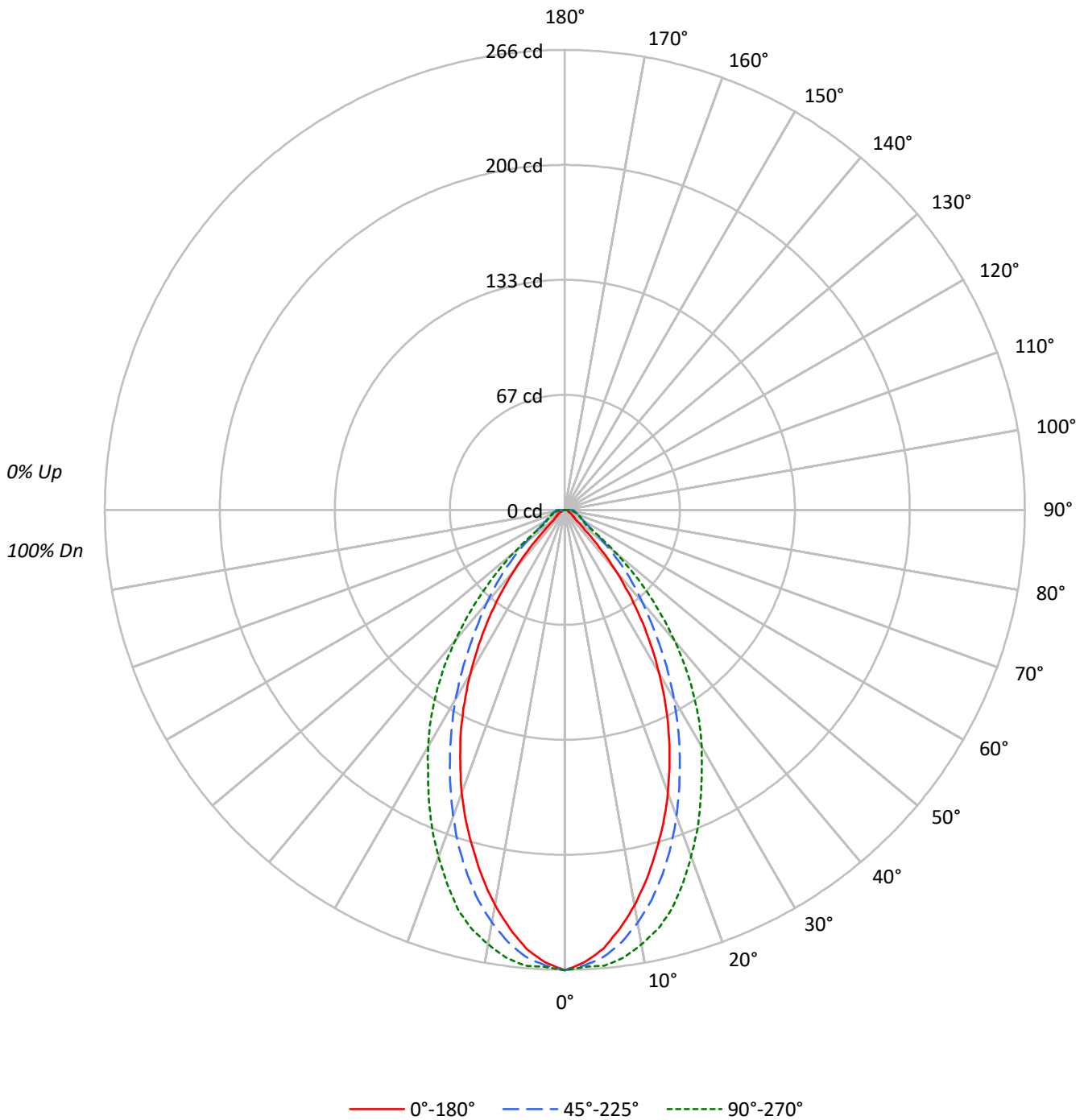
Lumens per Lamp: N/A
Luminaire Lumens: 289.8 lumens
Efficiency: N/A
Efficacy: 24.8 lumens/watt
Spacing Criteria (0/90/45): 0.78 / 0.96 / 0.91
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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: P1058286

CATALOG NUMBER: S122RDR-H290D835-X4F0-XX-UDD-BVL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1058286

CATALOG NUMBER: S122RDR-H290D835-X4F0-XX-UDD-BVL-W

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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	112	108	105	102	109	106	103	101	102	100	97	98	96	95	95	93	92	90				90
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81				81
3	98	91	85	80	96	89	84	79	86	82	78	84	80	76	81	78	75	74				74
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67				67
5	87	77	70	65	85	76	70	65	74	69	64	72	67	64	71	66	63	61				61
6	82	72	65	60	80	71	64	59	69	63	59	68	62	58	66	62	58	56				56
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52				52
8	73	62	55	51	72	62	55	51	60	54	50	59	54	50	58	53	50	48				48
9	69	58	52	47	68	58	51	47	57	51	47	56	50	47	55	50	46	45				45
10	66	55	48	44	64	54	48	44	53	48	44	53	47	43	52	47	43	42				42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4914	4914	4914
5°	4720	4807	4901
10°	4351	4542	4782
15°	3899	4166	4566
20°	3421	3705	4190
25°	2897	3201	3783
30°	2325	2687	3369
35°	1719	2149	2917
40°	1077	1684	2370
45°	423	1268	1756
50°	207	855	1077
55°	164	563	479
60°	125	458	439
65°	92	428	428
70°	113	437	437
75°	121	485	456
80°	181	638	499
85°	360	1080	720

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 87.5°
 Luminance: 1988 cd/sqm



TEST NUMBER: P1058286

CATALOG NUMBER: S122RDR-H290D835-X4F0-XX-UDD-BVL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.3	8.4
10°-20°	61.5	21.2
20°-30°	73.6	25.4
30°-40°	61.9	21.4
40°-50°	35.2	12.2
50°-60°	13.9	4.8
60°-70°	8.8	3.0
70°-80°	6.5	2.2
80°-90°	4.1	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°	159.4	55.0
0°-40°	221.3	76.3
0°-60°	270.4	93.3
0°-90°	289.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	289.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	266	266	266	266	266	
5°	255	260	260	262	265	24
15°	204	211	218	231	239	57
25°	142	149	157	173	186	65
35°	76	83	95	116	130	47
45°	16	28	49	61	67	15
55°	5	11	18	18	15	5
65°	2	10	10	9	10	2
75°	2	7	7	6	6	2
85°	2	5	5	5	3	2
90°	0	0	0	0	0	



TEST NUMBER: P1058286

CATALOG NUMBER: S122RDR-H290D835-X4F0-XX-UDD-BVL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	266.3	266.3	266.3	266.3	266.3
2.5°	262.0	266.7	263.7	264.1	264.6
5°	254.8	260.3	259.5	262.4	264.6
7.5°	244.1	250.1	252.2	257.3	261.2
10°	232.2	239.0	242.4	250.5	255.2
12.5°	218.6	226.2	231.3	241.6	248.4
15°	204.1	211.3	218.1	230.9	239.0
17.5°	189.6	196.8	204.1	218.1	226.6
20°	174.2	181.1	188.7	203.6	213.4
22.5°	158.1	165.3	173.0	188.3	200.2
25°	142.3	148.7	157.2	173.4	185.8
27.5°	125.7	132.1	141.4	158.1	171.3
30°	109.1	115.5	126.1	143.1	158.1
32.5°	92.4	99.3	110.8	129.5	144.4
35°	76.3	83.1	95.4	115.9	129.5
37.5°	60.5	68.2	81.8	101.8	114.6
40°	44.7	53.7	69.9	87.8	98.4
42.5°	29.8	40.9	58.8	73.7	82.7
45°	16.2	28.5	48.6	60.9	67.3
47.5°	8.9	18.3	38.8	48.6	52.4
50°	7.2	12.8	29.8	37.1	37.5
52.5°	6.0	11.5	22.2	26.4	24.3
55°	5.1	11.1	17.5	17.9	14.9
57.5°	4.3	10.7	14.5	12.8	12.8
60°	3.4	10.7	12.4	11.5	11.9
62.5°	2.6	10.7	11.1	10.2	10.7
65°	2.1	9.8	9.8	9.4	9.8
67.5°	2.1	8.9	8.9	8.5	8.9
70°	2.1	8.5	8.1	8.1	8.1
72.5°	1.7	7.7	7.7	7.2	7.2
75°	1.7	6.8	6.8	6.4	6.4
77.5°	1.7	6.4	6.4	6.0	5.5
80°	1.7	5.5	6.0	5.5	4.7
82.5°	1.7	5.1	5.5	5.1	3.8
85°	1.7	4.7	5.1	4.7	3.4
87.5°	1.3	4.7	4.7	3.8	2.6
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1058286
 CATALOG NUMBER: S122RDR-H290D835-X4F0-XX-UDD-BVL-W

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	3.26	4.48	3.62	4.79	5.11	5.26	6.48	5.62	6.79	7.10
	3H	4.77	5.86	5.15	6.19	6.55	7.22	8.30	7.60	8.63	9.00
	4H	5.32	6.34	5.73	6.69	7.07	8.13	9.14	8.54	9.49	9.88
	6H	5.88	6.81	6.29	7.18	7.58	9.01	9.94	9.43	10.31	10.71
	8H	6.17	7.05	6.60	7.44	7.85	9.41	10.29	9.84	10.68	11.09
	12H	6.53	7.37	6.96	7.75	8.19	9.85	10.69	10.29	11.08	11.51
4H	2H	4.43	5.44	4.84	5.79	6.18	5.87	6.89	6.28	7.24	7.62
	3H	6.61	7.45	7.03	7.85	8.26	8.11	8.94	8.52	9.35	9.75
	4H	7.66	8.41	8.10	8.83	9.28	9.18	9.93	9.62	10.35	10.80
	6H	8.55	9.20	9.02	9.65	10.12	10.29	10.94	10.75	11.38	11.85
	8H	8.94	9.54	9.41	9.99	10.46	10.81	11.41	11.28	11.86	12.33
	12H	9.36	9.89	9.84	10.38	10.85	11.38	11.92	11.87	12.40	12.88
8H	4H	8.47	9.07	8.94	9.52	9.99	9.68	10.28	10.15	10.73	11.20
	6H	9.84	10.34	10.35	10.84	11.32	11.07	11.57	11.57	12.06	12.55
	8H	10.56	11.00	11.08	11.52	12.01	11.80	12.25	12.33	12.77	13.26
	12H	11.31	11.70	11.83	12.20	12.77	12.64	13.03	13.15	13.52	14.10
12H	4H	8.63	9.16	9.12	9.65	10.12	9.78	10.31	10.26	10.79	11.27
	6H	10.17	10.62	10.69	11.13	11.63	11.29	11.73	11.81	12.25	12.74
	8H	11.08	11.48	11.60	11.97	12.54	12.17	12.56	12.68	13.06	13.63