

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: P1058313

Luminaire Tested: S122RDR-H290D927-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058313
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-H290D927-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: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

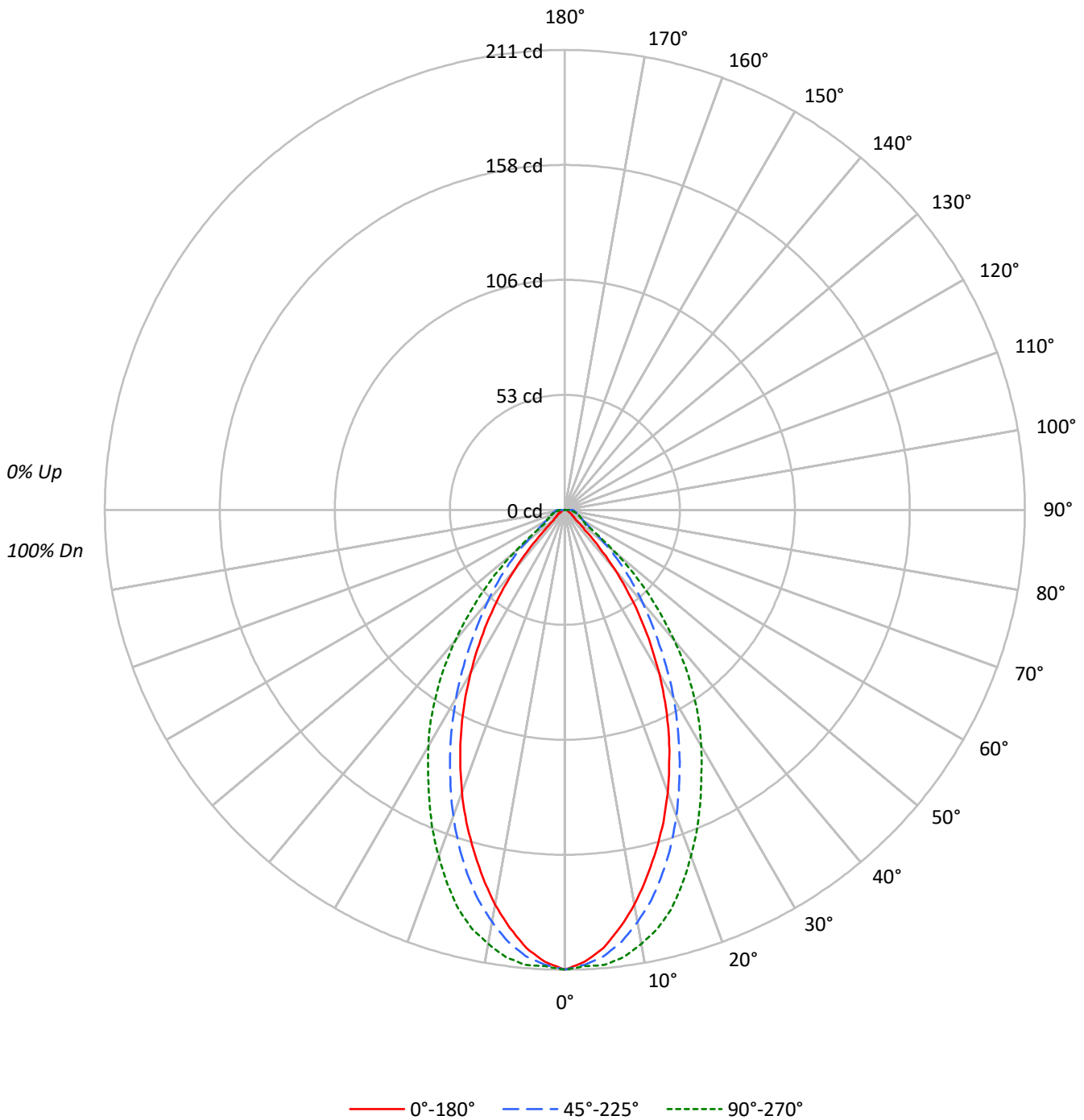
Lumens per Lamp: N/A
Luminaire Lumens: 229.5 lumens
Efficiency: N/A
Efficacy: 19.6 lumens/watt
Spacing Criteria (0/90/45): 0.78 / 0.96 / 0.91
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3892	3892	3892
5°	3738	3806	3882
10°	3446	3598	3789
15°	3089	3301	3616
20°	2710	2936	3321
25°	2295	2535	2995
30°	1841	2129	2668
35°	1361	1703	2311
40°	853	1332	1879
45°	334	1005	1391
50°	164	677	853
55°	129	444	380
60°	100	362	347
65°	74	341	341
70°	92	345	345
75°	93	385	364
80°	138	499	393
85°	275	847	572

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 22.5°
 Vertical Angle: 87.5°
 Luminance: 1565 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.3	8.4
10°-20°	48.7	21.2
20°-30°	58.3	25.4
30°-40°	49.0	21.4
40°-50°	27.9	12.2
50°-60°	11.0	4.8
60°-70°	6.9	3.0
70°-80°	5.2	2.2
80°-90°	3.3	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°	126.2	55.0
0°-40°	175.3	76.4
0°-60°	214.2	93.3
0°-90°	229.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	229.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	211	211	211	211	211	
5°	202	206	206	208	210	19
15°	162	167	173	183	189	45
25°	113	118	124	137	147	51
35°	60	66	76	92	103	37
45°	13	23	38	48	53	12
55°	4	9	14	14	12	4
65°	2	8	8	7	8	2
75°	1	5	5	5	5	1
85°	1	4	4	4	3	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	210.9	210.9	210.9	210.9	210.9
2.5°	207.6	211.3	208.9	209.2	209.6
5°	201.8	206.2	205.5	207.9	209.6
7.5°	193.4	198.1	199.8	203.8	206.9
10°	183.9	189.3	192.0	198.4	202.2
12.5°	173.1	179.2	183.3	191.4	196.8
15°	161.7	167.4	172.8	182.9	189.3
17.5°	150.2	155.9	161.7	172.8	179.5
20°	138.0	143.4	149.5	161.3	169.1
22.5°	125.2	130.9	137.0	149.2	158.6
25°	112.7	117.8	124.5	137.4	147.1
27.5°	99.6	104.6	112.0	125.2	135.7
30°	86.4	91.5	99.9	113.4	125.2
32.5°	73.2	78.6	87.7	102.6	114.4
35°	60.4	65.8	75.6	91.8	102.6
37.5°	47.9	54.0	64.8	80.7	90.8
40°	35.4	42.5	55.3	69.5	78.0
42.5°	23.6	32.4	46.6	58.4	65.5
45°	12.8	22.6	38.5	48.3	53.3
47.5°	7.1	14.5	30.7	38.5	41.5
50°	5.7	10.1	23.6	29.4	29.7
52.5°	4.7	9.1	17.5	20.9	19.2
55°	4.0	8.8	13.8	14.2	11.8
57.5°	3.4	8.4	11.5	10.1	10.1
60°	2.7	8.4	9.8	9.1	9.4
62.5°	2.0	8.4	8.8	8.1	8.4
65°	1.7	7.8	7.8	7.4	7.8
67.5°	1.7	7.1	7.1	6.7	7.1
70°	1.7	6.7	6.4	6.4	6.4
72.5°	1.3	6.1	6.1	5.7	5.7
75°	1.3	5.4	5.4	5.1	5.1
77.5°	1.3	5.1	5.1	4.7	4.4
80°	1.3	4.4	4.7	4.4	3.7
82.5°	1.3	4.0	4.4	4.0	3.0
85°	1.3	3.7	4.0	3.7	2.7
87.5°	1.0	3.7	3.7	3.0	2.0
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	2.39	3.61	2.75	3.92	4.24	4.42	5.64	4.79	5.95	6.27
	3H	3.94	5.03	4.32	5.36	5.72	6.39	7.48	6.78	7.81	8.18
	4H	4.49	5.50	4.89	5.85	6.24	7.32	8.33	7.72	8.68	9.07
	6H	5.03	5.96	5.45	6.34	6.73	8.20	9.13	8.62	9.50	9.90
	8H	5.32	6.19	5.75	6.59	6.99	8.60	9.48	9.03	9.87	10.28
	12H	5.66	6.50	6.09	6.88	7.31	9.04	9.88	9.47	10.26	10.69
4H	2H	3.60	4.61	4.00	4.96	5.34	5.05	6.06	5.46	6.42	6.80
	3H	5.79	6.63	6.21	7.03	7.44	7.29	8.13	7.71	8.53	8.93
	4H	6.85	7.59	7.28	8.01	8.46	8.37	9.12	8.81	9.54	9.99
	6H	7.74	8.39	8.20	8.83	9.30	9.48	10.13	9.95	10.58	11.05
	8H	8.11	8.72	8.58	9.16	9.64	10.00	10.60	10.47	11.05	11.52
	12H	8.51	9.05	9.00	9.53	10.01	10.57	11.10	11.06	11.59	12.06
8H	4H	7.65	8.26	8.12	8.71	9.18	8.87	9.47	9.34	9.92	10.39
	6H	9.03	9.53	9.54	10.03	10.51	10.26	10.76	10.77	11.26	11.74
	8H	9.73	10.18	10.26	10.70	11.19	10.99	11.44	11.51	11.95	12.45
	12H	10.47	10.87	10.99	11.36	11.93	11.82	12.21	12.33	12.71	13.28
12H	4H	7.82	8.35	8.30	8.83	9.31	8.97	9.50	9.46	9.99	10.46
	6H	9.36	9.81	9.89	10.33	10.82	10.48	10.93	11.00	11.44	11.94
	8H	10.26	10.66	10.78	11.15	11.72	11.35	11.75	11.87	12.24	12.81