

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: P1058317

Luminaire Tested: S122RDR-H290D927-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058317
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-19)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122RDR-H290D927-X4F0-XX-UDD-WVL-B
Description: DEFINE 2 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

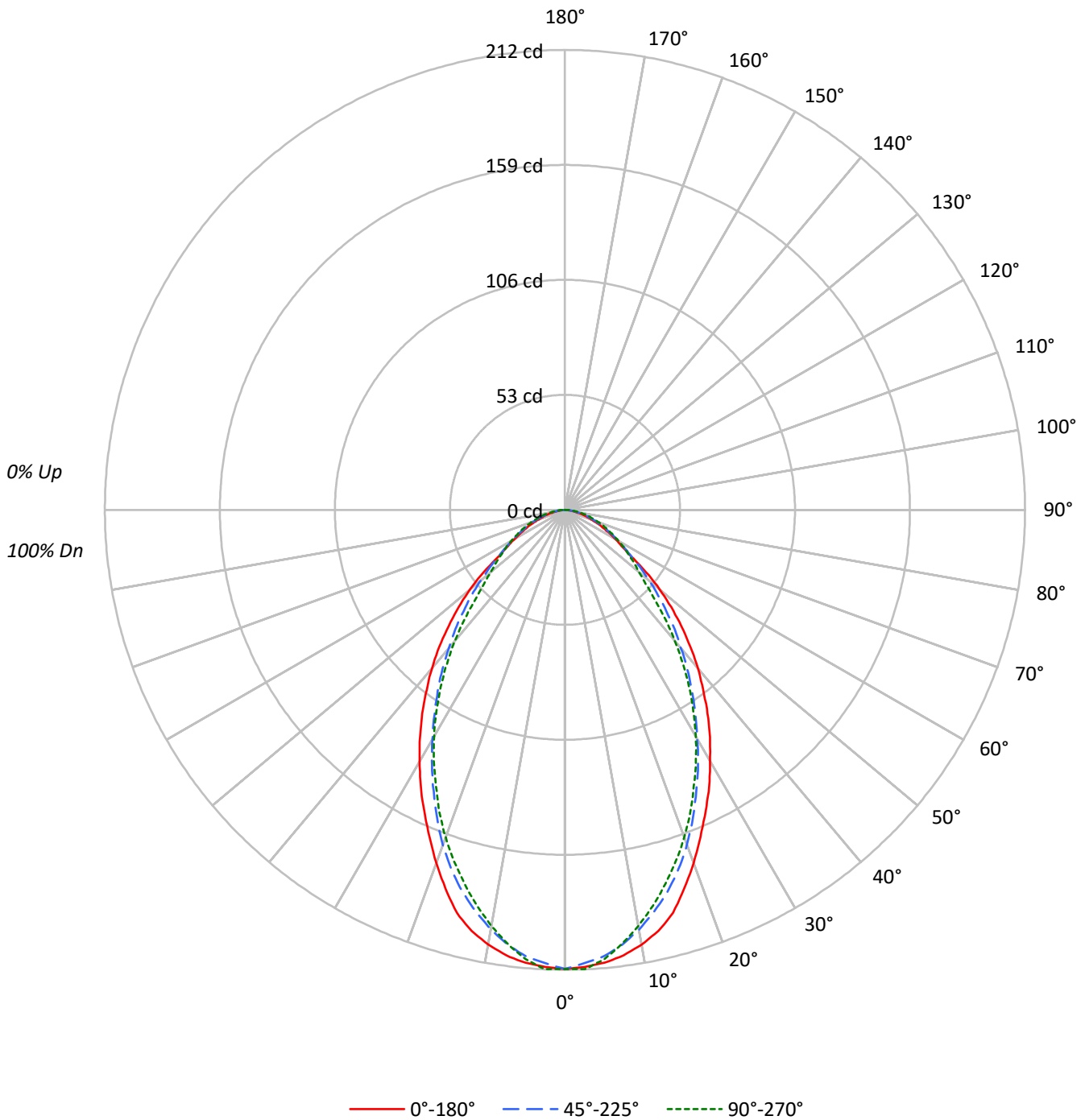
Lumens per Lamp: N/A
Luminaire Lumens: 321.4 lumens
Efficiency: N/A
Efficacy: 27.5 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.92 / 1.02
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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	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	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88				88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77				77
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68				68
4	89	79	71	65	87	77	70	65	75	69	64	73	68	63	71	66	63	61				61
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54				54
6	77	66	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49				49
7	72	60	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	44				44
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41				41
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37				37
10	60	48	41	36	59	48	41	36	47	41	36	46	40	36	45	40	36	34				34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3905	3905	3905
5°	3882	3827	3851
10°	3813	3680	3650
15°	3675	3483	3412
20°	3401	3228	3156
25°	3121	2916	2861
30°	2851	2599	2570
35°	2582	2300	2246
40°	2298	2004	1898
45°	1978	1722	1521
50°	1633	1450	1277
55°	1181	1203	1149
60°	982	1033	1044
65°	838	899	956
70°	691	798	874
75°	577	670	791
80°	425	542	712
85°	148	275	635

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1978 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	19.6	6.1
10°-20°	51.5	16.0
20°-30°	66.7	20.7
30°-40°	65.4	20.3
40°-50°	51.5	16.0
50°-60°	33.7	10.5
60°-70°	20.5	6.4
70°-80°	10.3	3.2
80°-90°	2.2	0.7
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°	137.7	42.9
0°-40°	203.1	63.2
0°-60°	288.3	89.7
0°-90°	321.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	321.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	212	212	212	212	212	
5°	210	210	207	208	208	20
15°	192	190	182	180	179	54
25°	153	148	143	142	140	70
35°	115	108	102	102	100	71
45°	76	71	66	61	58	58
55°	37	39	37	36	36	35
65°	19	20	21	22	22	19
75°	8	8	9	11	11	9
85°	1	1	1	2	3	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	211.6	211.6	211.6	211.6	211.6
2.5°	210.9	211.3	209.2	211.3	211.9
5°	209.6	209.6	206.6	207.9	207.9
7.5°	207.2	206.9	202.2	202.2	201.8
10°	203.5	202.2	196.4	195.4	194.8
12.5°	198.8	196.4	189.7	188.0	187.0
15°	192.4	189.7	182.3	179.9	178.6
17.5°	183.0	180.3	173.9	171.2	169.8
20°	173.2	169.1	164.4	162.1	160.7
22.5°	163.1	158.4	154.0	152.3	151.0
25°	153.3	148.3	143.2	142.5	140.5
27.5°	143.9	137.8	132.8	132.4	130.7
30°	133.8	127.4	122.0	122.3	120.6
32.5°	124.3	118.3	111.9	112.2	110.2
35°	114.6	108.2	102.1	101.8	99.7
37.5°	104.5	98.4	92.7	91.3	89.3
40°	95.4	89.3	83.2	80.9	78.8
42.5°	85.6	80.2	74.8	71.1	68.4
45°	75.8	71.1	66.0	61.3	58.3
47.5°	66.4	62.7	58.3	52.6	50.5
50°	56.9	54.2	50.5	45.5	44.5
52.5°	47.2	46.2	43.8	40.4	40.1
55°	36.7	38.7	37.4	36.1	35.7
57.5°	31.0	31.3	32.3	32.0	32.0
60°	26.6	26.6	28.0	28.3	28.3
62.5°	22.6	22.9	24.3	24.9	24.9
65°	19.2	19.5	20.6	21.6	21.9
67.5°	15.8	16.5	17.5	18.5	18.9
70°	12.8	13.5	14.8	15.8	16.2
72.5°	10.4	10.8	12.1	13.1	13.5
75°	8.1	8.4	9.4	10.8	11.1
77.5°	5.7	6.4	7.4	8.4	9.1
80°	4.0	4.4	5.1	6.4	6.7
82.5°	2.4	2.7	3.4	4.4	4.7
85°	0.7	1.0	1.3	2.4	3.0
87.5°	0.0	0.0	0.0	0.7	1.3
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	10.85	12.25	11.21	12.56	12.87	11.03	12.43	11.40	12.74	13.06
	3H	11.98	13.23	12.36	13.56	13.92	12.49	13.74	12.87	14.07	14.43
	4H	12.33	13.50	12.73	13.85	14.23	13.03	14.20	13.44	14.55	14.93
	6H	12.52	13.59	12.93	13.96	14.35	13.45	14.52	13.86	14.89	15.28
	8H	12.54	13.56	12.97	13.95	14.35	13.57	14.59	14.00	14.98	15.38
	12H	12.53	13.50	12.96	13.88	14.31	13.65	14.63	14.09	15.01	15.44
4H	2H	11.31	12.47	11.71	12.82	13.21	11.46	12.63	11.86	12.98	13.36
	3H	12.65	13.61	13.06	14.01	14.41	13.13	14.09	13.54	14.49	14.89
	4H	13.09	13.95	13.53	14.37	14.81	13.80	14.66	14.23	15.07	15.52
	6H	13.36	14.11	13.82	14.55	15.02	14.33	15.07	14.79	15.52	15.98
	8H	13.41	14.10	13.88	14.55	15.02	14.50	15.19	14.96	15.64	16.11
	12H	13.40	14.02	13.89	14.50	14.97	14.62	15.23	15.10	15.71	16.19
8H	4H	13.31	14.00	13.77	14.45	14.92	13.94	14.64	14.41	15.08	15.55
	6H	13.65	14.22	14.15	14.72	15.20	14.58	15.14	15.08	15.64	16.12
	8H	13.73	14.24	14.25	14.76	15.25	14.81	15.32	15.33	15.83	16.32
	12H	13.75	14.20	14.26	14.69	15.26	14.99	15.44	15.51	15.94	16.51
12H	4H	13.32	13.93	13.80	14.41	14.89	13.93	14.55	14.42	15.03	15.50
	6H	13.68	14.19	14.20	14.70	15.19	14.57	15.08	15.09	15.59	16.09
	8H	13.80	14.25	14.31	14.74	15.31	14.85	15.30	15.36	15.79	16.36