

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: P1058290

Luminaire Tested: S122RDR-H290D835-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1058290
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-H290D835-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: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

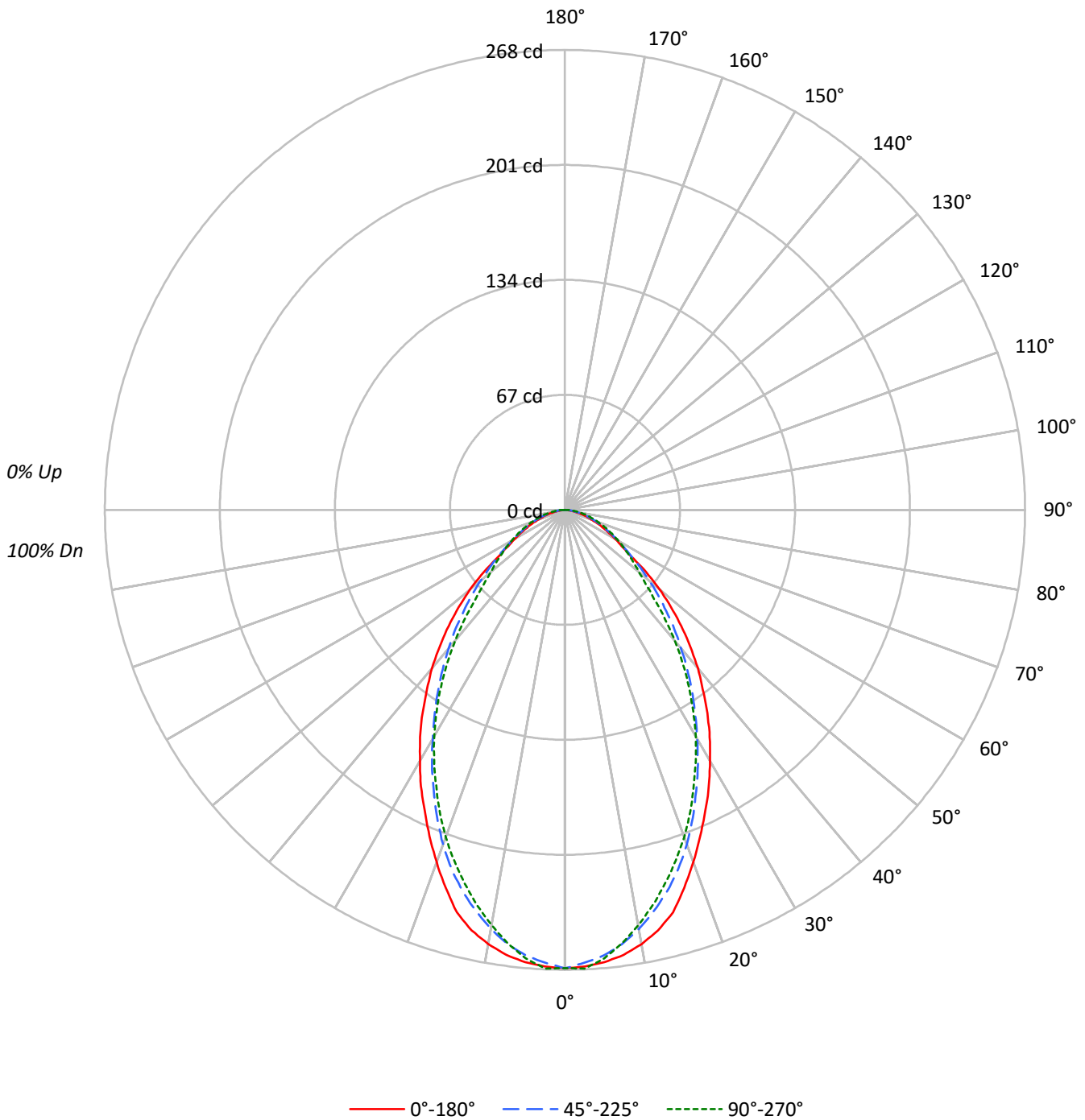
Lumens per Lamp: N/A
Luminaire Lumens: 405.7 lumens
Efficiency: N/A
Efficacy: 34.7 lumens/watt
Spacing Criteria (0/90/45): 1 / 0.92 / 1.02
Luminous Opening: Rectangular (W 0.15' x L: 4' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	93	92	90	88
2	103	96	91	86	100	94	89	85	91	87	83	88	84	81	85	82	79	77
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	79	71	65	87	77	70	65	75	69	64	73	68	63	71	66	63	61
5	83	72	64	58	81	71	63	58	69	62	57	67	61	57	65	60	56	54
6	77	66	58	52	75	65	57	52	63	56	52	61	56	51	60	55	51	49
7	72	60	53	47	71	60	52	47	58	52	47	57	51	47	56	50	46	44
8	68	56	48	43	66	55	48	43	54	47	43	53	47	43	52	46	42	41
9	64	52	45	40	63	51	44	39	50	44	39	49	43	39	48	43	39	37
10	60	48	41	36	59	48	41	36	47	41	36	46	40	36	45	40	36	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4929	4929	4929
5°	4901	4829	4860
10°	4814	4647	4606
15°	4640	4396	4306
20°	4293	4077	3984
25°	3940	3681	3612
30°	3599	3281	3245
35°	3257	2904	2836
40°	2900	2532	2397
45°	2497	2176	1921
50°	2064	1832	1610
55°	1493	1518	1451
60°	1240	1303	1318
65°	1057	1131	1205
70°	874	1009	1101
75°	727	848	998
80°	542	680	903
85°	191	360	805

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2497 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.7	6.1
10°-20°	65.0	16.0
20°-30°	84.2	20.7
30°-40°	82.5	20.3
40°-50°	65.0	16.0
50°-60°	42.6	10.5
60°-70°	25.9	6.4
70°-80°	13.0	3.2
80°-90°	2.8	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°	173.9	42.9
0°-40°	256.4	63.2
0°-60°	364.0	89.7
0°-90°	405.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	405.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	267	267	267	267	267	
5°	265	265	261	262	262	25
15°	243	240	230	227	225	68
25°	194	187	181	180	177	89
35°	145	136	129	128	126	90
45°	96	90	83	77	74	74
55°	46	49	47	46	45	44
65°	24	25	26	27	28	24
75°	10	11	12	14	14	11
85°	1	1	2	3	4	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	267.1	267.1	267.1	267.1	267.1
2.5°	266.3	266.7	264.1	266.7	267.5
5°	264.6	264.6	260.7	262.4	262.4
7.5°	261.6	261.2	255.2	255.2	254.8
10°	256.9	255.2	248.0	246.7	245.8
12.5°	251.0	248.0	239.5	237.3	236.1
15°	242.9	239.5	230.1	227.1	225.4
17.5°	231.0	227.6	219.5	216.1	214.4
20°	218.6	213.5	207.6	204.6	202.9
22.5°	205.9	199.9	194.4	192.3	190.6
25°	193.5	187.2	180.8	179.9	177.4
27.5°	181.6	174.0	167.6	167.2	165.0
30°	168.9	160.8	154.0	154.4	152.3
32.5°	157.0	149.3	141.2	141.6	139.1
35°	144.6	136.5	128.9	128.5	125.9
37.5°	131.9	124.2	117.0	115.3	112.7
40°	120.4	112.7	105.1	102.1	99.5
42.5°	108.0	101.2	94.4	89.7	86.3
45°	95.7	89.7	83.4	77.4	73.6
47.5°	83.8	79.1	73.6	66.4	63.8
50°	71.9	68.5	63.8	57.4	56.1
52.5°	59.5	58.3	55.3	51.0	50.6
55°	46.4	48.9	47.2	45.5	45.1
57.5°	39.1	39.6	40.8	40.4	40.4
60°	33.6	33.6	35.3	35.7	35.7
62.5°	28.5	28.9	30.6	31.5	31.5
65°	24.2	24.7	25.9	27.2	27.6
67.5°	20.0	20.8	22.1	23.4	23.8
70°	16.2	17.0	18.7	20.0	20.4
72.5°	13.2	13.6	15.3	16.6	17.0
75°	10.2	10.6	11.9	13.6	14.0
77.5°	7.2	8.1	9.4	10.6	11.5
80°	5.1	5.5	6.4	8.1	8.5
82.5°	3.0	3.4	4.3	5.5	6.0
85°	0.9	1.3	1.7	3.0	3.8
87.5°	0.0	0.0	0.0	0.9	1.7
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	11.67	13.07	12.03	13.38	13.69	11.84	13.24	12.21	13.55	13.87
	3H	12.80	14.04	13.18	14.37	14.74	13.30	14.55	13.68	14.88	15.24
	4H	13.15	14.31	13.55	14.66	15.04	13.84	15.01	14.24	15.36	15.74
	6H	13.33	14.40	13.75	14.77	15.17	14.26	15.33	14.67	15.70	16.09
	8H	13.36	14.38	13.79	14.77	15.17	14.38	15.40	14.81	15.79	16.20
	12H	13.35	14.32	13.78	14.70	15.13	14.47	15.44	14.90	15.82	16.25
4H	2H	12.12	13.29	12.53	13.64	14.02	12.27	13.43	12.67	13.78	14.16
	3H	13.46	14.42	13.87	14.82	15.23	13.94	14.90	14.35	15.30	15.70
	4H	13.90	14.76	14.34	15.18	15.62	14.60	15.46	15.04	15.88	16.32
	6H	14.18	14.92	14.64	15.36	15.83	15.14	15.88	15.60	16.33	16.79
	8H	14.22	14.91	14.69	15.36	15.83	15.31	16.00	15.78	16.45	16.92
	12H	14.22	14.83	14.70	15.31	15.79	15.43	16.05	15.91	16.53	17.00
8H	4H	14.12	14.81	14.59	15.26	15.73	14.75	15.45	15.22	15.89	16.36
	6H	14.46	15.03	14.96	15.53	16.01	15.39	15.95	15.89	16.45	16.93
	8H	14.54	15.05	15.06	15.57	16.06	15.62	16.13	16.14	16.64	17.13
	12H	14.56	15.01	15.07	15.51	16.07	15.81	16.25	16.32	16.75	17.32
12H	4H	14.13	14.75	14.62	15.23	15.70	14.74	15.36	15.22	15.84	16.31
	6H	14.49	15.00	15.01	15.51	16.00	15.38	15.89	15.90	16.40	16.89
	8H	14.61	15.06	15.12	15.55	16.12	15.66	16.11	16.17	16.60	17.17