

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: P1058295

Luminaire Tested: S122RDR-H290D840-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058295  
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-H290D840-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: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

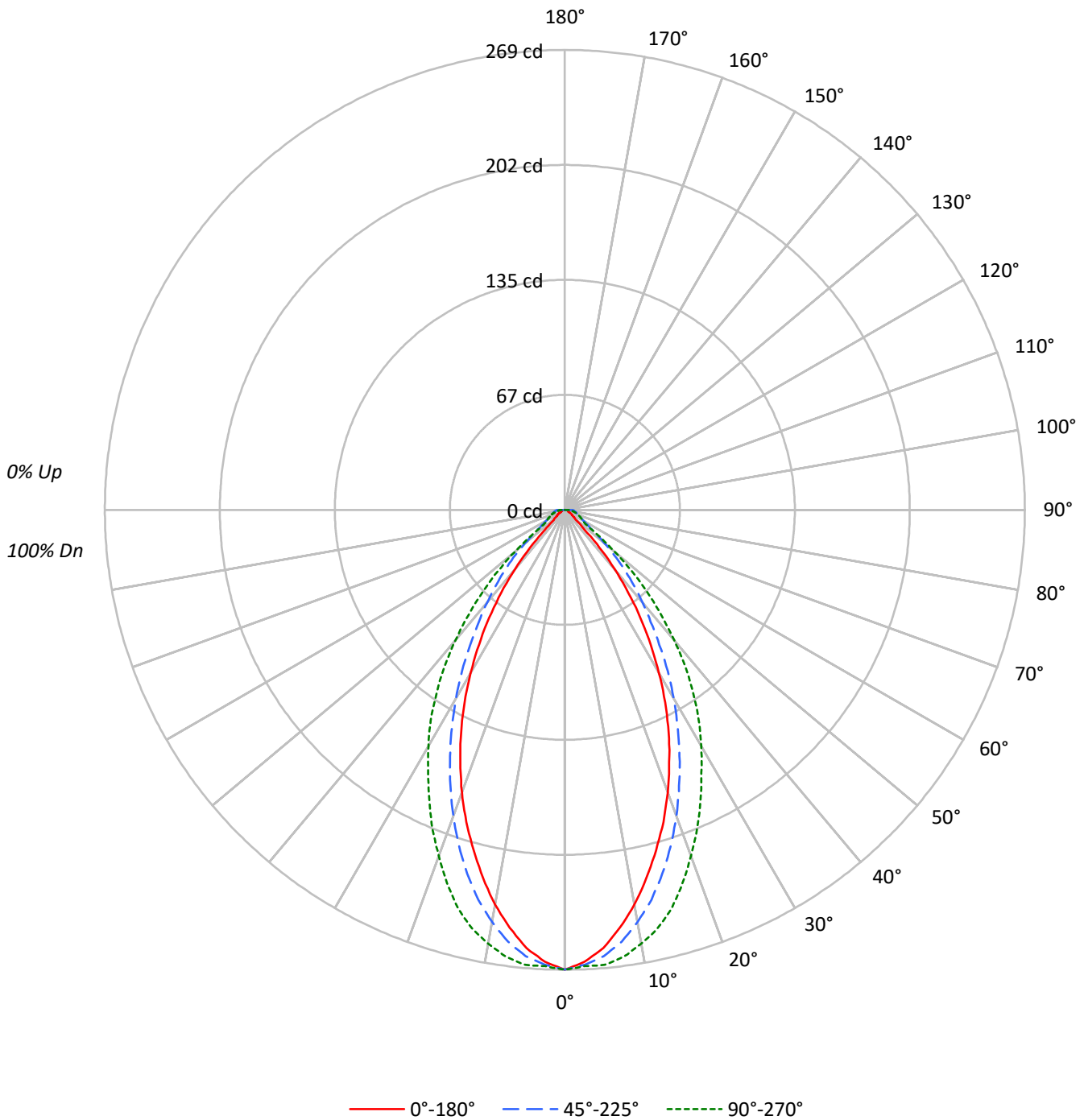
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 292.7 lumens  
Efficiency: N/A  
Efficacy: 25.0 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									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	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	76	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°	4962	4962	4962
5°	4766	4853	4949
10°	4394	4587	4829
15°	3937	4208	4612
20°	3456	3743	4232
25°	2926	3233	3820
30°	2346	2712	3401
35°	1735	2172	2946
40°	1089	1701	2394
45°	425	1279	1775
50°	210	864	1088
55°	167	566	486
60°	125	461	443
65°	96	432	432
70°	119	442	442
75°	121	492	463
80°	181	638	499
85°	360	1101	720

**MAXIMUM LUMINANCE 45°-90°:**

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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	24.6	8.4
10°-20°	62.1	21.2
20°-30°	74.3	25.4
30°-40°	62.5	21.4
40°-50°	35.6	12.2
50°-60°	14.0	4.8
60°-70°	8.8	3.0
70°-80°	6.6	2.2
80°-90°	4.2	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°	160.9	55.0
0°-40°	223.5	76.3
0°-60°	273.1	93.3
0°-90°	292.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	292.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	269	269	269	269	269	
5°	257	263	262	265	267	24
15°	206	213	220	233	241	58
25°	144	150	159	175	188	65
35°	77	84	96	117	131	48
45°	16	29	49	62	68	15
55°	5	11	18	18	15	5
65°	2	10	10	10	10	2
75°	2	7	7	6	6	2
85°	2	5	5	5	3	2
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	268.9	268.9	268.9	268.9	268.9
2.5°	264.6	269.3	266.3	266.7	267.2
5°	257.3	262.9	262.0	265.0	267.2
7.5°	246.5	252.5	254.7	259.9	263.7
10°	234.5	241.4	244.8	253.0	257.7
12.5°	220.7	228.5	233.6	243.9	250.8
15°	206.1	213.4	220.3	233.2	241.4
17.5°	191.5	198.8	206.1	220.3	228.9
20°	176.0	182.9	190.6	205.7	215.5
22.5°	159.6	166.9	174.7	190.2	202.2
25°	143.7	150.2	158.8	175.1	187.6
27.5°	126.9	133.4	142.8	159.6	173.0
30°	110.1	116.6	127.3	144.6	159.6
32.5°	93.4	100.2	111.9	130.8	145.9
35°	77.0	83.9	96.4	117.0	130.8
37.5°	61.1	68.8	82.6	102.8	115.7
40°	45.2	54.2	70.6	88.6	99.4
42.5°	30.1	41.3	59.4	74.4	83.5
45°	16.3	28.8	49.0	61.5	68.0
47.5°	9.0	18.5	39.2	49.0	52.9
50°	7.3	12.9	30.1	37.4	37.9
52.5°	6.0	11.6	22.4	26.7	24.5
55°	5.2	11.2	17.6	18.1	15.1
57.5°	4.3	10.8	14.6	12.9	12.9
60°	3.4	10.8	12.5	11.6	12.0
62.5°	2.6	10.8	11.2	10.3	10.8
65°	2.2	9.9	9.9	9.5	9.9
67.5°	2.2	9.0	9.0	8.6	9.0
70°	2.2	8.6	8.2	8.2	8.2
72.5°	1.7	7.7	7.7	7.3	7.3
75°	1.7	6.9	6.9	6.5	6.5
77.5°	1.7	6.5	6.5	6.0	5.6
80°	1.7	5.6	6.0	5.6	4.7
82.5°	1.7	5.2	5.6	5.2	3.9
85°	1.7	4.7	5.2	4.7	3.4
87.5°	1.3	4.7	4.7	3.9	2.6
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	3.28	4.50	3.65	4.82	5.13	5.28	6.50	5.64	6.81	7.12
	3H	4.82	5.91	5.20	6.24	6.60	7.25	8.34	7.63	8.67	9.03
	4H	5.37	6.38	5.77	6.73	7.12	8.17	9.19	8.58	9.54	9.92
	6H	5.92	6.85	6.34	7.22	7.62	9.05	9.98	9.47	10.35	10.75
	8H	6.21	7.09	6.64	7.48	7.89	9.46	10.34	9.89	10.73	11.14
	12H	6.56	7.41	7.00	7.79	8.22	9.90	10.74	10.33	11.12	11.55
4H	2H	4.46	5.47	4.86	5.82	6.21	5.90	6.91	6.30	7.26	7.65
	3H	6.65	7.49	7.07	7.89	8.29	8.14	8.98	8.56	9.38	9.79
	4H	7.70	8.45	8.14	8.87	9.32	9.23	9.97	9.66	10.39	10.84
	6H	8.60	9.25	9.06	9.69	10.16	10.33	10.98	10.79	11.42	11.89
	8H	8.98	9.59	9.45	10.04	10.51	10.86	11.46	11.33	11.91	12.38
	12H	9.40	9.93	9.89	10.42	10.89	11.43	11.96	11.91	12.45	12.92
8H	4H	8.51	9.11	8.98	9.56	10.03	9.72	10.32	10.19	10.77	11.24
	6H	9.89	10.39	10.39	10.88	11.37	11.11	11.61	11.61	12.10	12.59
	8H	10.61	11.06	11.13	11.57	12.07	11.86	12.30	12.38	12.82	13.31
	12H	11.35	11.75	11.87	12.24	12.81	12.68	13.07	13.20	13.57	14.14
12H	4H	8.67	9.21	9.16	9.69	10.16	9.82	10.35	10.31	10.84	11.31
	6H	10.22	10.67	10.74	11.18	11.68	11.33	11.77	11.85	12.29	12.78
	8H	11.14	11.53	11.65	12.03	12.60	12.22	12.61	12.74	13.11	13.68