

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: P1058214

Luminaire Tested: S122RDR-H1005D840-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058214  
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-H1005D840-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: -

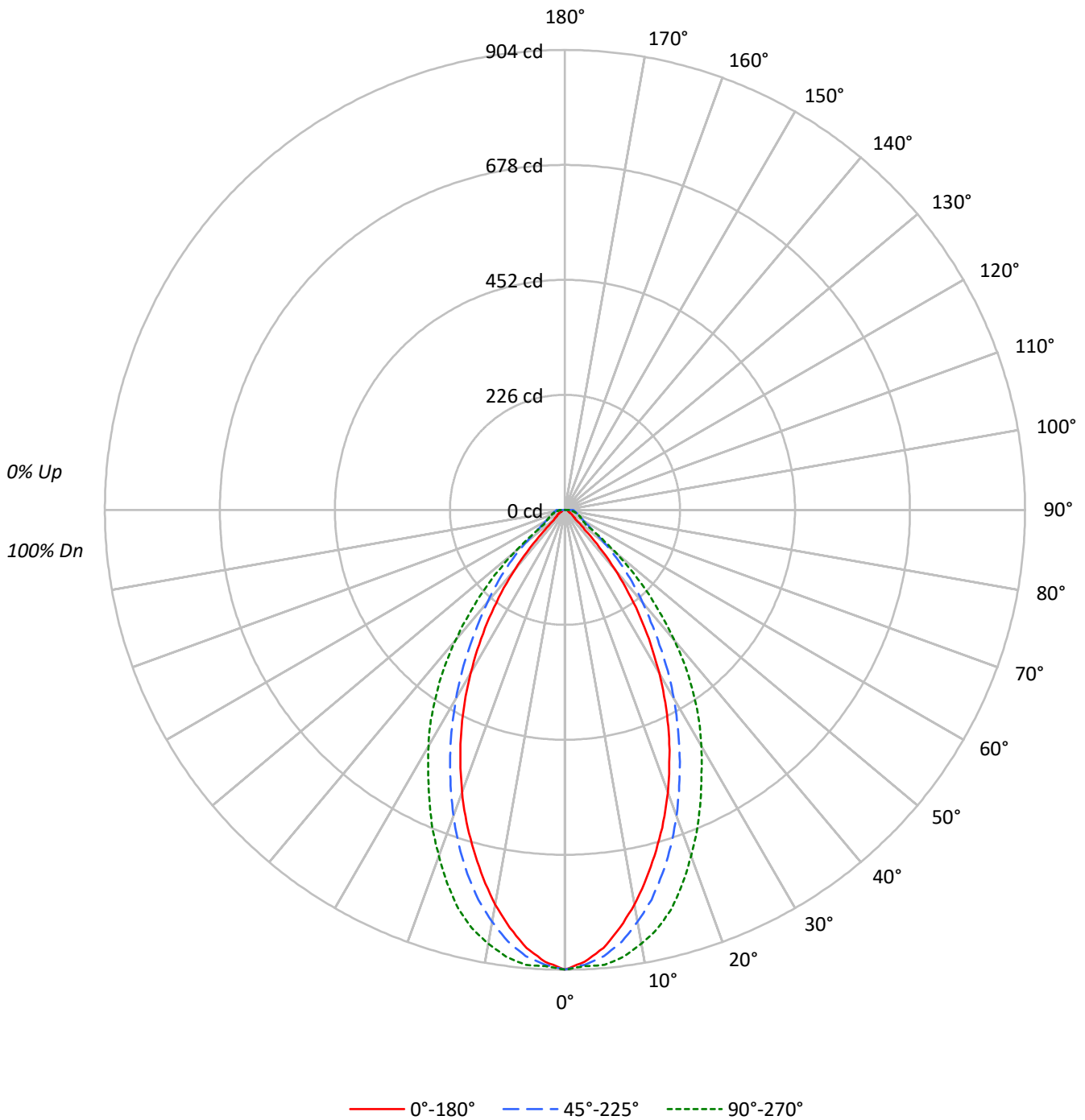
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 983.4 lumens  
Efficiency: N/A  
Efficacy: 26.9 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): 36.5  
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				
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°	16672	16672	16672
5°	16013	16308	16628
10°	14761	15411	16224
15°	13227	14138	15493
20°	11609	12575	14221
25°	9830	10860	12833
30°	7886	9117	11427
35°	5830	7294	9900
40°	3657	5711	8043
45°	1433	4301	5960
50°	706	2905	3652
55°	557	1908	1628
60°	428	1546	1495
65°	314	1450	1450
70°	388	1484	1484
75°	414	1647	1547
80°	616	2147	1690
85°	1228	3663	2456

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 87.5°  
 Luminance: 6726 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	82.5	8.4
10°-20°	208.6	21.2
20°-30°	249.6	25.4
30°-40°	210.1	21.4
40°-50°	119.6	12.2
50°-60°	47.2	4.8
60°-70°	29.7	3.0
70°-80°	22.1	2.2
80°-90°	14.0	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°	540.7	55.0
0°-40°	750.8	76.3
0°-60°	917.6	93.3
0°-90°	983.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	983.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	904	904	904	904	904	
5°	864	883	880	890	898	80
15°	692	717	740	784	811	193
25°	483	504	533	588	630	220
35°	259	282	324	393	440	160
45°	55	97	165	207	228	52
55°	17	38	59	61	51	16
65°	7	33	33	32	33	8
75°	6	23	23	22	22	6
85°	6	16	17	16	12	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	903.5	903.5	903.5	903.5	903.5
2.5°	889.0	904.9	894.8	896.3	897.7
5°	864.5	883.3	880.4	890.5	897.7
7.5°	828.3	848.6	855.8	873.1	886.1
10°	787.8	811.0	822.5	850.0	865.9
12.5°	741.6	767.6	785.0	819.7	842.8
15°	692.4	717.0	740.1	783.5	811.0
17.5°	643.3	667.9	692.4	740.1	769.1
20°	591.2	614.4	640.4	691.0	724.2
22.5°	536.3	560.9	586.9	639.0	679.4
25°	482.8	504.5	533.4	588.4	630.3
27.5°	426.4	448.1	479.9	536.3	581.1
30°	370.1	391.8	427.9	485.7	536.3
32.5°	313.7	336.8	375.9	439.5	490.1
35°	258.8	281.9	323.8	393.2	439.5
37.5°	205.3	231.3	277.6	345.5	388.9
40°	151.8	182.1	237.1	297.8	333.9
42.5°	101.2	138.8	199.5	250.1	280.4
45°	54.9	96.9	164.8	206.7	228.4
47.5°	30.4	62.2	131.5	164.8	177.8
50°	24.6	43.4	101.2	125.8	127.2
52.5°	20.2	39.0	75.2	89.6	82.4
55°	17.3	37.6	59.3	60.7	50.6
57.5°	14.5	36.1	49.2	43.4	43.4
60°	11.6	36.1	41.9	39.0	40.5
62.5°	8.7	36.1	37.6	34.7	36.1
65°	7.2	33.2	33.2	31.8	33.2
67.5°	7.2	30.4	30.4	28.9	30.4
70°	7.2	28.9	27.5	27.5	27.5
72.5°	5.8	26.0	26.0	24.6	24.6
75°	5.8	23.1	23.1	21.7	21.7
77.5°	5.8	21.7	21.7	20.2	18.8
80°	5.8	18.8	20.2	18.8	15.9
82.5°	5.8	17.3	18.8	17.3	13.0
85°	5.8	15.9	17.3	15.9	11.6
87.5°	4.3	15.9	15.9	13.0	8.7
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	7.46	8.68	7.83	9.00	9.31	9.50	10.72	9.86	11.03	11.34
	3H	9.01	10.09	9.39	10.42	10.79	11.47	12.55	11.85	12.89	13.25
	4H	9.56	10.58	9.97	10.93	11.31	12.38	13.40	12.79	13.75	14.13
	6H	10.12	11.05	10.54	11.42	11.82	13.27	14.20	13.68	14.57	14.96
	8H	10.42	11.30	10.85	11.69	12.10	13.67	14.55	14.10	14.94	15.35
	12H	10.78	11.62	11.21	12.00	12.43	14.11	14.95	14.55	15.34	15.77
4H	2H	8.65	9.66	9.05	10.01	10.40	10.11	11.12	10.52	11.48	11.86
	3H	10.85	11.68	11.26	12.09	12.49	12.36	13.19	12.77	13.60	14.00
	4H	11.90	12.65	12.34	13.07	13.52	13.43	14.18	13.87	14.60	15.04
	6H	12.80	13.45	13.27	13.90	14.36	14.54	15.19	15.00	15.64	16.10
	8H	13.19	13.79	13.66	14.24	14.71	15.06	15.67	15.53	16.12	16.59
	12H	13.61	14.14	14.10	14.63	15.10	15.64	16.17	16.13	16.66	17.13
8H	4H	12.70	13.31	13.18	13.76	14.23	13.92	14.53	14.39	14.98	15.45
	6H	14.09	14.58	14.59	15.08	15.56	15.32	15.81	15.82	16.31	16.79
	8H	14.81	15.25	15.33	15.77	16.26	16.05	16.50	16.58	17.02	17.51
	12H	15.56	15.95	16.07	16.45	17.02	16.89	17.28	17.40	17.78	18.35
12H	4H	12.87	13.40	13.35	13.89	14.36	14.02	14.56	14.51	15.04	15.52
	6H	14.42	14.87	14.94	15.38	15.88	15.53	15.98	16.06	16.50	16.99
	8H	15.33	15.73	15.85	16.22	16.80	16.42	16.81	16.93	17.31	17.88