

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: P1059723

Luminaire Tested: S123RDR-H560D940-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059723  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H560D940-X4F0-XX-UDD-WVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

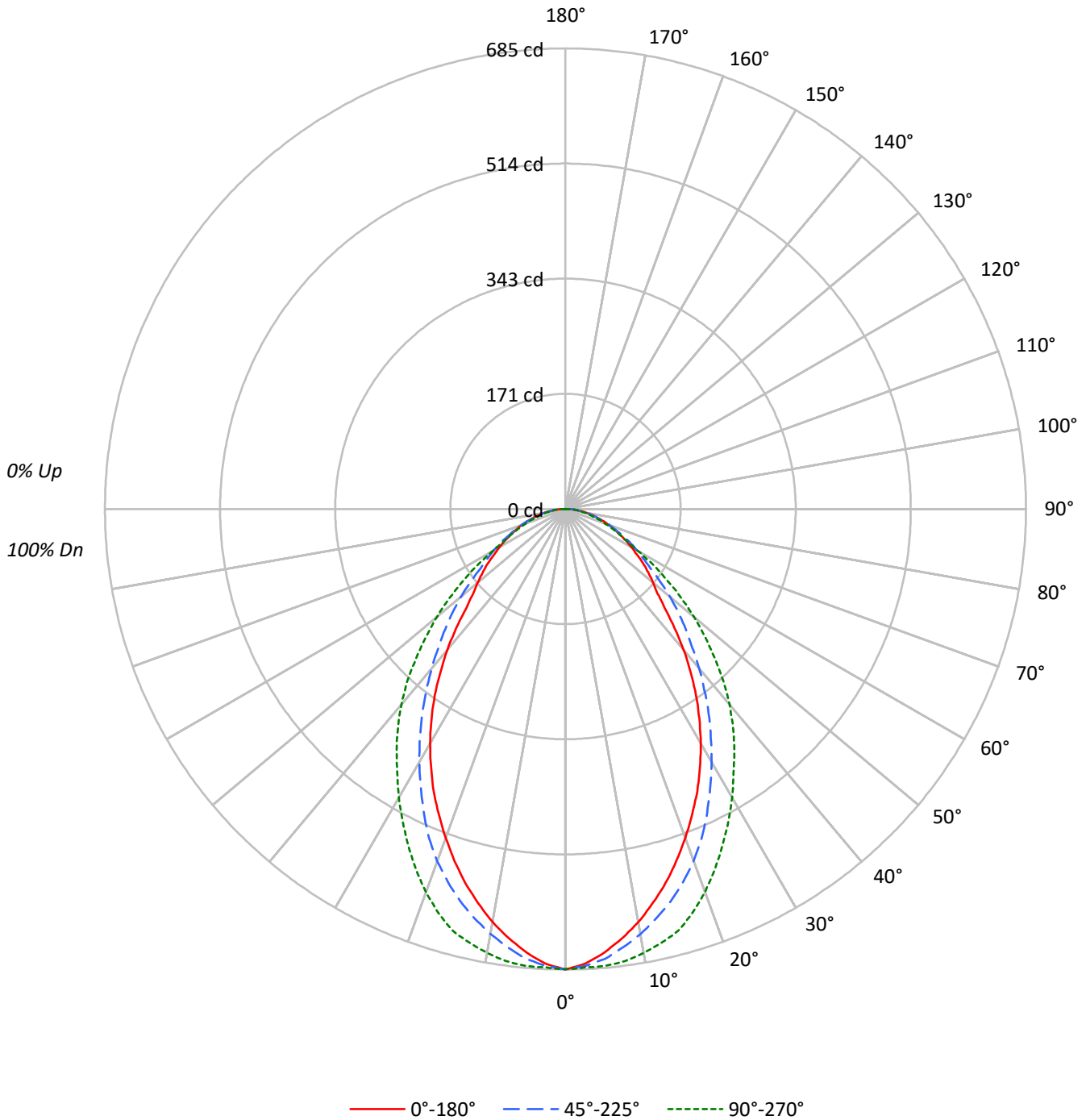
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1203.2 lumens  
Efficiency: N/A  
Efficacy: 69.1 lumens/watt  
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 17.4  
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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8040	8040	8040
5°	7807	7919	8044
10°	7440	7651	7996
15°	6999	7343	7895
20°	6509	6965	7578
25°	6009	6459	7161
30°	5457	5897	6720
35°	4857	5321	6276
40°	4191	4743	5817
45°	3464	4198	5216
50°	3111	3703	4554
55°	2883	3161	3775
60°	2656	2879	2893
65°	2473	2603	2423
70°	2328	2366	2125
75°	2191	2114	1869
80°	2069	1914	1751
85°	1981	2142	1981

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5216 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	63.4	5.3
10°-20°	170.9	14.2
20°-30°	231.1	19.2
30°-40°	237.5	19.7
40°-50°	199.5	16.6
50°-60°	143.0	11.9
60°-70°	91.1	7.6
70°-80°	50.0	4.2
80°-90°	16.7	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°	465.4	38.7
0°-40°	702.9	58.4
0°-60°	1045.4	86.9
0°-90°	1203.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1203.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	685	685	685	685	685	
5°	662	674	672	676	682	62
15°	576	592	604	630	649	161
25°	464	481	498	526	553	213
35°	339	357	371	404	438	211
45°	209	227	253	289	314	165
55°	141	144	154	175	184	126
65°	89	94	94	88	87	89
75°	48	53	47	43	41	51
85°	15	15	16	16	15	16
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	684.7	684.7	684.7	684.7	684.7
2.5°	677.1	686.5	680.0	680.6	682.4
5°	662.3	674.1	671.8	676.5	682.4
7.5°	644.1	657.0	657.6	668.8	678.2
10°	624.0	637.6	641.7	658.8	670.6
12.5°	600.5	615.2	624.0	645.2	660.6
15°	575.7	591.6	604.0	629.9	649.4
17.5°	548.6	565.7	581.6	609.3	629.3
20°	520.9	539.2	557.4	583.4	606.4
22.5°	492.0	510.9	529.8	555.1	580.4
25°	463.8	481.4	498.5	525.6	552.7
27.5°	433.1	451.4	466.1	496.2	524.4
30°	402.5	420.7	434.9	466.1	495.6
32.5°	370.6	389.5	402.5	434.9	465.5
35°	338.8	357.1	371.2	404.2	437.8
37.5°	305.2	325.3	339.4	376.5	409.5
40°	273.4	292.3	309.4	348.3	379.5
42.5°	240.4	259.9	279.3	319.4	348.3
45°	208.6	226.9	252.8	289.3	314.1
47.5°	185.6	197.4	227.5	258.1	281.7
50°	170.3	175.0	202.7	229.8	249.3
52.5°	155.0	158.5	177.4	202.1	216.9
55°	140.8	143.8	154.4	175.0	184.4
57.5°	125.5	128.5	137.3	149.1	154.4
60°	113.1	115.5	122.6	124.3	123.2
62.5°	100.8	104.3	107.8	103.7	101.9
65°	89.0	94.3	93.7	88.4	87.2
67.5°	78.4	83.7	80.7	75.4	73.7
70°	67.8	73.1	68.9	63.6	61.9
72.5°	57.7	63.6	57.2	52.4	51.3
75°	48.3	53.0	46.6	43.0	41.2
77.5°	39.5	43.0	37.1	34.2	33.0
80°	30.6	33.0	28.3	26.5	25.9
82.5°	22.4	23.6	20.6	21.8	21.2
85°	14.7	15.3	15.9	16.5	14.7
87.5°	7.1	10.0	10.0	9.4	7.7
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	14.43	15.89	14.79	16.20	16.52	15.50	16.96	15.86	17.27	17.59
	3H	16.13	17.44	16.50	17.77	18.13	16.58	17.89	16.96	18.22	18.58
	4H	16.78	18.01	17.18	18.36	18.74	16.98	18.21	17.38	18.56	18.94
	6H	17.28	18.42	17.69	18.78	19.18	17.29	18.43	17.71	18.79	19.19
	8H	17.45	18.53	17.88	18.92	19.32	17.43	18.51	17.85	18.90	19.30
	12H	17.58	18.61	18.01	18.99	19.42	17.55	18.58	17.98	18.96	19.39
4H	2H	15.03	16.26	15.43	16.61	16.99	15.90	17.13	16.30	17.48	17.86
	3H	16.96	17.98	17.37	18.38	18.78	17.22	18.24	17.63	18.64	19.04
	4H	17.77	18.68	18.20	19.10	19.54	17.74	18.65	18.17	19.07	19.51
	6H	18.42	19.21	18.87	19.66	20.12	18.17	18.97	18.63	19.41	19.87
	8H	18.64	19.38	19.10	19.83	20.29	18.36	19.10	18.82	19.55	20.02
	12H	18.81	19.47	19.29	19.95	20.43	18.54	19.21	19.02	19.69	20.16
8H	4H	18.01	18.75	18.47	19.19	19.66	17.98	18.73	18.45	19.17	19.64
	6H	18.79	19.41	19.29	19.90	20.38	18.53	19.15	19.03	19.64	20.12
	8H	19.11	19.66	19.62	20.17	20.66	18.81	19.36	19.32	19.87	20.36
	12H	19.37	19.86	19.89	20.36	20.92	19.10	19.59	19.61	20.08	20.65
12H	4H	18.02	18.68	18.50	19.16	19.63	18.01	18.67	18.49	19.15	19.62
	6H	18.83	19.38	19.34	19.89	20.38	18.58	19.14	19.10	19.65	20.14
	8H	19.20	19.69	19.71	20.18	20.75	18.92	19.41	19.43	19.90	20.47