

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: P1059613

Luminaire Tested: S123RDR-H340D927-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059613  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H340D927-X4F0-XX-UDD-WVL-B  
Description: DEFINE 3 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: -

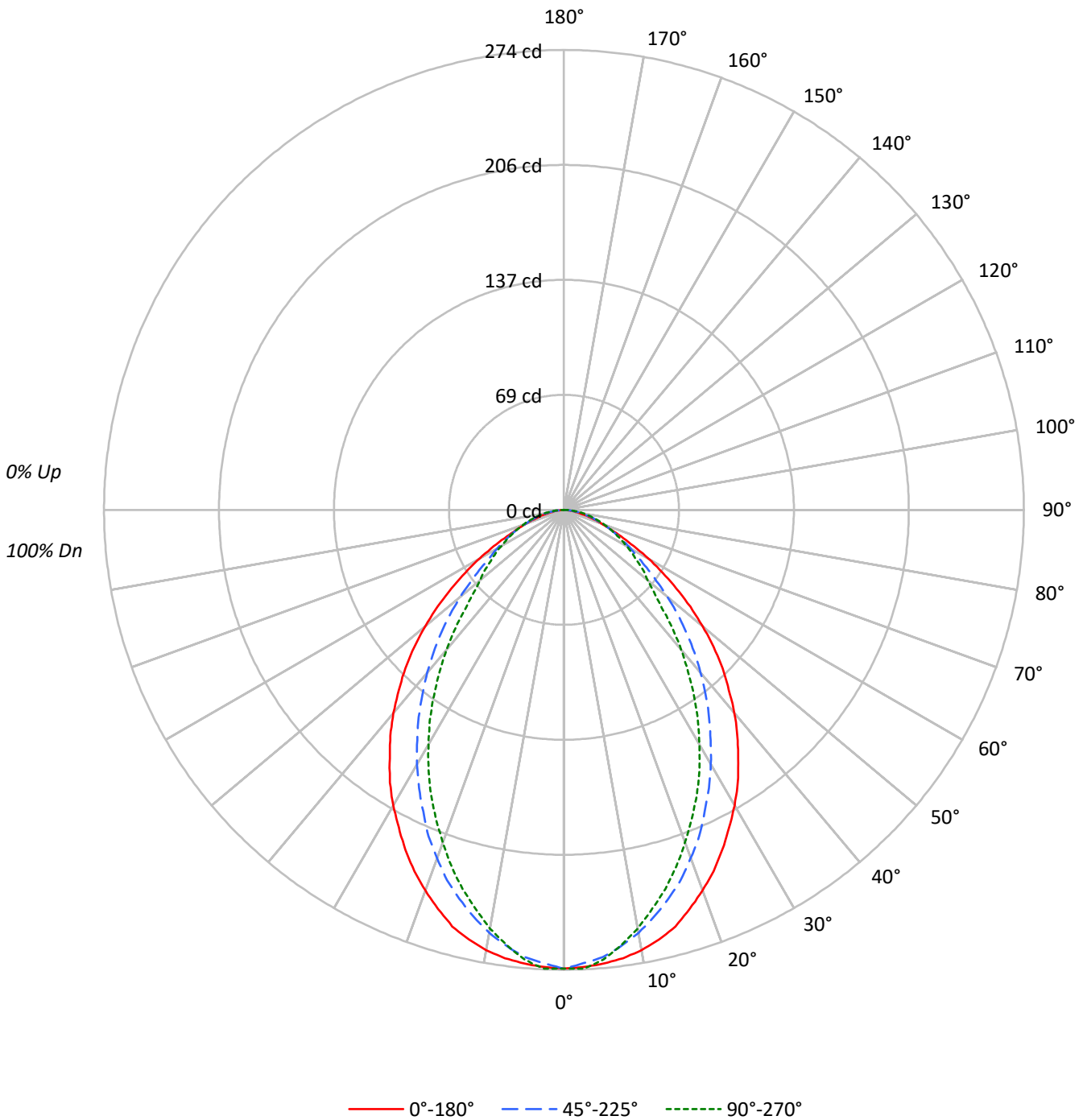
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 478.0 lumens  
Efficiency: N/A  
Efficacy: 40.9 lumens/watt  
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09  
Luminous Opening: Rectangular (W 0.23' 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				
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35				
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				

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

	0°	45°	90°
0°	3209	3209	3209
5°	3198	3152	3171
10°	3176	3051	3020
15°	3123	2919	2840
20°	3017	2759	2635
25°	2894	2571	2425
30°	2757	2374	2187
35°	2595	2162	1935
40°	2422	1939	1666
45°	2220	1712	1370
50°	1967	1471	1187
55°	1675	1230	1089
60°	1364	1073	1010
65°	1039	950	939
70°	814	845	879
75°	658	762	821
80°	487	622	757
85°	269	404	660

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2220 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	25.4	5.3
10°-20°	68.3	14.3
20°-30°	92.8	19.4
30°-40°	96.2	20.1
40°-50°	81.1	17.0
50°-60°	57.6	12.0
60°-70°	35.2	7.4
70°-80°	17.5	3.7
80°-90°	4.0	0.8
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°	186.4	39.0
0°-40°	282.6	59.1
0°-60°	421.3	88.1
0°-90°	478.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	478.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	273	273	273	273	273	
5°	271	271	267	269	269	26
15°	257	252	240	236	234	72
25°	223	214	198	191	187	103
35°	181	167	151	140	135	113
45°	134	120	103	89	82	103
55°	82	73	60	55	53	73
65°	37	36	34	34	34	38
75°	14	15	17	17	18	16
85°	2	2	3	4	5	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	273.3	273.3	273.3	273.3	273.3
2.5°	272.7	273.0	270.4	273.3	273.6
5°	271.3	271.3	267.4	269.0	269.0
7.5°	269.4	268.7	262.1	262.1	261.5
10°	266.4	264.4	255.9	254.3	253.3
12.5°	262.1	258.9	248.3	245.4	243.4
15°	256.9	252.0	240.1	235.9	233.6
17.5°	249.3	244.4	231.3	225.4	222.7
20°	241.4	234.2	220.8	214.8	210.9
22.5°	232.9	223.7	210.6	203.3	199.1
25°	223.4	213.5	198.4	191.2	187.2
27.5°	213.2	202.4	186.9	178.7	174.8
30°	203.3	190.9	175.1	165.9	161.3
32.5°	192.8	178.7	162.6	153.1	148.5
35°	181.0	167.2	150.8	140.3	135.0
37.5°	169.8	155.7	138.6	127.5	121.5
40°	158.0	143.9	126.5	115.0	108.7
42.5°	145.5	132.1	115.0	101.5	95.6
45°	133.7	119.6	103.1	89.0	82.5
47.5°	120.9	107.7	91.7	77.2	72.6
50°	107.7	95.6	80.5	67.3	65.0
52.5°	94.9	84.8	69.3	60.8	59.8
55°	81.8	73.3	60.1	54.9	53.2
57.5°	69.6	63.4	51.6	48.9	48.3
60°	58.1	52.9	45.7	44.0	43.0
62.5°	47.0	44.0	39.7	39.1	38.4
65°	37.4	36.1	34.2	34.2	33.8
67.5°	29.6	29.6	29.2	29.9	29.6
70°	23.7	24.0	24.6	25.3	25.6
72.5°	18.7	19.7	20.4	21.4	21.7
75°	14.5	15.4	16.8	17.4	18.1
77.5°	10.5	11.5	12.8	13.8	14.5
80°	7.2	7.9	9.2	10.5	11.2
82.5°	4.6	4.9	5.9	7.2	7.9
85°	2.0	2.3	3.0	4.3	4.9
87.5°	0.0	0.0	0.3	1.3	2.3
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	12.86	14.31	13.22	14.62	14.94	10.95	12.40	11.32	12.72	13.03
	3H	13.76	15.05	14.14	15.38	15.75	12.53	13.82	12.91	14.15	14.51
	4H	14.04	15.25	14.44	15.60	15.98	13.13	14.34	13.53	14.69	15.07
	6H	14.19	15.31	14.60	15.68	16.07	13.58	14.70	13.99	15.06	15.46
	8H	14.21	15.28	14.64	15.67	16.07	13.73	14.79	14.16	15.18	15.58
	12H	14.21	15.22	14.64	15.61	16.04	13.83	14.84	14.26	15.22	15.65
4H	2H	13.10	14.32	13.50	14.67	15.05	11.50	12.71	11.90	13.06	13.44
	3H	14.22	15.22	14.63	15.62	16.02	13.27	14.27	13.68	14.67	15.08
	4H	14.61	15.51	15.04	15.92	16.36	13.98	14.88	14.42	15.30	15.74
	6H	14.85	15.63	15.31	16.07	16.53	14.56	15.34	15.02	15.78	16.24
	8H	14.89	15.62	15.36	16.07	16.53	14.75	15.48	15.21	15.92	16.39
	12H	14.90	15.55	15.38	16.03	16.50	14.89	15.53	15.37	16.01	16.49
8H	4H	14.77	15.49	15.23	15.94	16.41	14.19	14.92	14.66	15.37	15.84
	6H	15.08	15.68	15.58	16.17	16.65	14.87	15.47	15.37	15.96	16.44
	8H	15.15	15.69	15.67	16.20	16.69	15.13	15.66	15.64	16.18	16.67
	12H	15.19	15.66	15.70	16.16	16.72	15.34	15.81	15.85	16.30	16.87
12H	4H	14.77	15.42	15.25	15.90	16.37	14.19	14.84	14.68	15.32	15.79
	6H	15.09	15.63	15.61	16.14	16.63	14.88	15.42	15.40	15.93	16.42
	8H	15.21	15.68	15.72	16.17	16.74	15.18	15.66	15.69	16.15	16.72