

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: P1059609

Luminaire Tested: S123RDR-H340D927-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059609  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H340D927-X4F0-XX-UDD-BVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

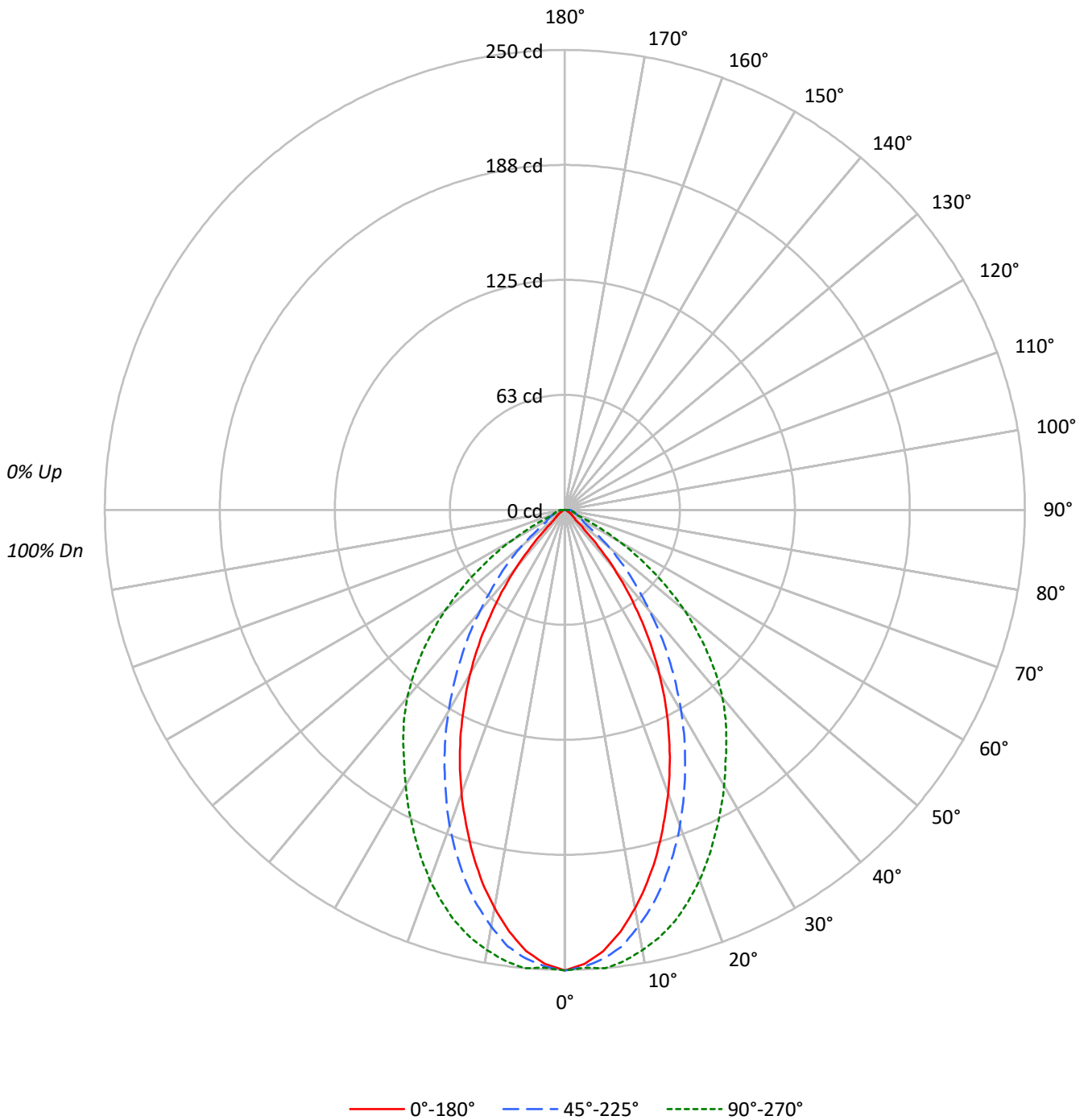
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 300.6 lumens  
Efficiency: N/A  
Efficacy: 25.7 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94  
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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81				
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73				
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66				
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50				
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47				
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43				
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40				

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

	0°	45°	90°
0°	2940	2940	2940
5°	2838	2886	2948
10°	2621	2742	2899
15°	2352	2536	2812
20°	2052	2286	2677
25°	1731	2003	2511
30°	1393	1713	2347
35°	1019	1411	2193
40°	636	1099	2043
45°	241	820	1820
50°	115	564	1551
55°	88	309	1200
60°	61	263	789
65°	44	228	328
70°	45	216	216
75°	59	222	222
80°	88	264	243
85°	175	445	350

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 1820 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.0	7.6
10°-20°	58.9	19.6
20°-30°	73.0	24.3
30°-40°	65.4	21.8
40°-50°	42.9	14.3
50°-60°	21.5	7.1
60°-70°	8.4	2.8
70°-80°	4.7	1.6
80°-90°	2.9	1.0
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°	154.9	51.5
0°-40°	220.3	73.3
0°-60°	284.6	94.7
0°-90°	300.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	300.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	250	250	250	250	250	
5°	241	245	245	247	250	22
15°	194	201	209	222	231	54
25°	134	142	155	177	194	61
35°	71	81	98	128	153	44
45°	14	23	49	85	110	14
55°	4	5	15	42	59	4
65°	2	5	8	11	12	2
75°	1	5	5	5	5	1
85°	1	3	3	3	3	1
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	250.4	250.4	250.4	250.4	250.4
2.5°	247.1	250.7	248.4	248.7	249.1
5°	240.8	244.8	244.8	247.4	250.1
7.5°	231.3	235.9	239.2	243.8	247.4
10°	219.8	225.4	230.0	238.2	243.1
12.5°	207.3	214.2	220.1	231.0	237.9
15°	193.5	201.4	208.6	222.4	231.3
17.5°	178.7	186.6	196.1	212.2	223.1
20°	164.2	172.1	182.9	201.0	214.2
22.5°	149.0	157.3	168.8	188.9	204.3
25°	133.6	141.8	154.6	176.7	193.8
27.5°	118.1	126.3	140.8	164.8	183.6
30°	102.7	110.9	126.3	152.0	173.1
32.5°	87.2	96.1	112.2	140.2	162.5
35°	71.1	80.6	98.4	128.0	153.0
37.5°	56.3	65.1	85.2	117.5	143.5
40°	41.5	51.0	71.7	107.3	133.3
42.5°	27.0	37.2	59.6	96.1	121.7
45°	14.5	23.4	49.4	84.6	109.6
47.5°	7.9	12.8	39.8	72.4	97.1
50°	6.3	7.2	30.9	61.9	84.9
52.5°	5.3	5.9	22.0	52.0	71.4
55°	4.3	5.3	15.1	41.5	58.6
57.5°	3.6	4.6	11.8	32.2	45.7
60°	2.6	3.9	11.2	23.7	33.6
62.5°	2.0	4.3	9.9	16.5	22.0
65°	1.6	4.9	8.2	10.9	11.8
67.5°	1.3	5.3	7.2	6.9	6.9
70°	1.3	4.9	6.3	5.9	6.3
72.5°	1.3	5.3	5.6	5.3	5.6
75°	1.3	4.9	4.9	4.9	4.9
77.5°	1.3	4.6	4.6	4.3	4.3
80°	1.3	3.9	3.9	3.9	3.6
82.5°	1.3	3.6	3.6	3.6	3.0
85°	1.3	3.3	3.3	3.3	2.6
87.5°	1.0	3.0	3.3	3.0	2.0
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	0.00	0.00	0.00	0.00	0.00	10.34	11.60	10.71	11.91	12.23
	3H	0.00	0.00	0.00	0.00	0.23	10.42	11.54	10.81	11.87	12.23
	4H	0.00	0.55	0.00	0.90	1.29	10.50	11.53	10.90	11.89	12.27
	6H	0.50	1.45	0.91	1.82	2.21	10.61	11.55	11.02	11.93	12.32
	8H	0.97	1.87	1.41	2.26	2.67	10.67	11.56	11.10	11.95	12.36
	12H	1.53	2.39	1.96	2.77	3.20	10.75	11.60	11.18	11.99	12.42
4H	2H	0.00	0.37	0.00	0.72	1.11	10.20	11.23	10.60	11.58	11.97
	3H	1.66	2.51	2.08	2.91	3.32	10.38	11.22	10.79	11.62	12.03
	4H	3.02	3.78	3.46	4.20	4.64	10.52	11.28	10.96	11.70	12.14
	6H	4.10	4.75	4.56	5.20	5.67	10.75	11.40	11.21	11.85	12.32
	8H	4.55	5.16	5.02	5.61	6.08	10.87	11.48	11.35	11.93	12.40
	12H	5.04	5.58	5.53	6.07	6.54	11.05	11.59	11.54	12.07	12.55
8H	4H	4.00	4.61	4.47	5.05	5.53	10.52	11.13	10.99	11.58	12.05
	6H	5.50	6.00	6.01	6.50	6.98	10.86	11.36	11.36	11.85	12.34
	8H	6.27	6.72	6.80	7.24	7.73	11.09	11.54	11.61	12.06	12.55
	12H	7.08	7.48	7.60	7.98	8.55	11.42	11.82	11.94	12.32	12.89
12H	4H	4.17	4.71	4.66	5.19	5.67	10.51	11.04	10.99	11.53	12.00
	6H	5.82	6.27	6.34	6.78	7.27	10.87	11.32	11.40	11.84	12.33
	8H	6.77	7.17	7.29	7.66	8.24	11.19	11.58	11.70	12.08	12.65