

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: P1059618

Luminaire Tested: S123RDR-H340D930-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059618  
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-H340D930-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: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

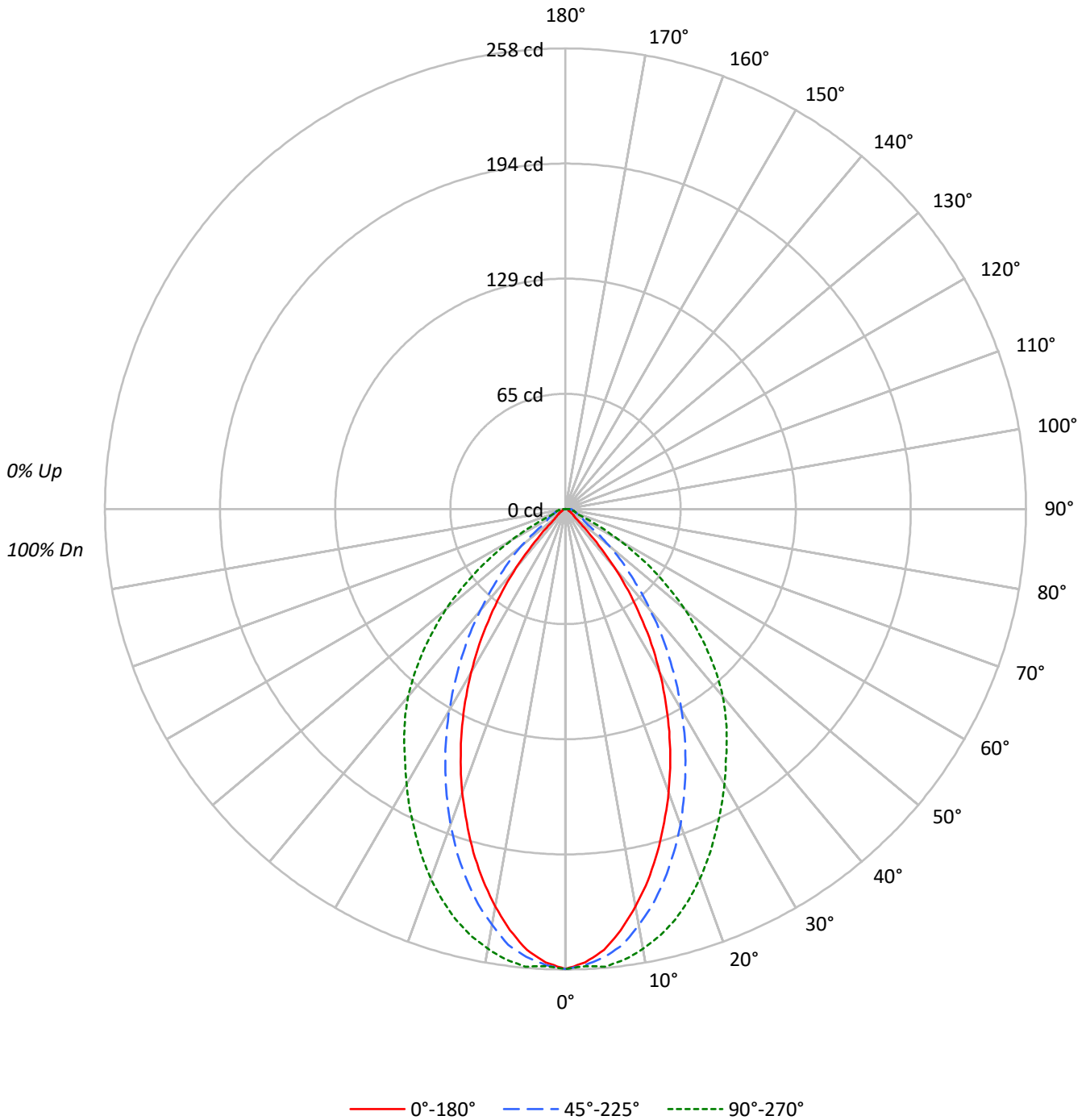
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 309.4 lumens  
Efficiency: N/A  
Efficacy: 26.4 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	86	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°	3026	3026	3026
5°	2922	2969	3033
10°	2697	2822	2983
15°	2420	2610	2893
20°	2112	2353	2754
25°	1781	2061	2583
30°	1432	1763	2415
35°	1048	1451	2258
40°	655	1131	2102
45°	247	844	1873
50°	117	581	1597
55°	90	319	1234
60°	63	270	810
65°	47	236	339
70°	48	220	220
75°	64	231	231
80°	95	277	250
85°	189	458	364

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 1873 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.7	7.6
10°-20°	60.7	19.6
20°-30°	75.1	24.3
30°-40°	67.3	21.8
40°-50°	44.1	14.3
50°-60°	22.1	7.1
60°-70°	8.6	2.8
70°-80°	4.9	1.6
80°-90°	3.0	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°	159.4	51.5
0°-40°	226.7	73.3
0°-60°	292.9	94.7
0°-90°	309.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	309.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	258	258	258	258	258	
5°	248	252	252	255	257	23
15°	199	207	215	229	238	55
25°	138	146	159	182	199	63
35°	73	83	101	132	158	46
45°	15	24	51	87	113	14
55°	4	5	16	43	60	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°	257.7	257.7	257.7	257.7	257.7
2.5°	254.3	258.0	255.7	256.0	256.3
5°	247.9	251.9	251.9	254.6	257.3
7.5°	238.0	242.8	246.2	250.9	254.6
10°	226.2	232.0	236.7	245.2	250.2
12.5°	213.3	220.4	226.5	237.7	244.8
15°	199.1	207.2	214.7	228.9	238.0
17.5°	183.9	192.0	201.8	218.4	229.6
20°	169.0	177.1	188.3	206.9	220.4
22.5°	153.4	161.9	173.7	194.4	210.3
25°	137.5	145.9	159.1	181.8	199.4
27.5°	121.6	130.0	144.9	169.6	188.9
30°	105.6	114.1	130.0	156.4	178.1
32.5°	89.7	98.9	115.5	144.3	167.3
35°	73.1	83.0	101.2	131.7	157.5
37.5°	57.9	67.0	87.7	120.9	147.6
40°	42.7	52.5	73.8	110.4	137.1
42.5°	27.8	38.3	61.3	98.9	125.3
45°	14.9	24.0	50.8	87.0	112.8
47.5°	8.1	13.2	41.0	74.5	99.9
50°	6.4	7.4	31.8	63.7	87.4
52.5°	5.4	6.1	22.7	53.5	73.5
55°	4.4	5.4	15.6	42.7	60.3
57.5°	3.7	4.7	12.2	33.2	47.1
60°	2.7	4.1	11.5	24.4	34.5
62.5°	2.0	4.4	10.2	16.9	22.7
65°	1.7	5.1	8.5	11.2	12.2
67.5°	1.4	5.4	7.4	7.1	7.1
70°	1.4	5.1	6.4	6.1	6.4
72.5°	1.4	5.4	5.8	5.4	5.8
75°	1.4	5.1	5.1	5.1	5.1
77.5°	1.4	4.7	4.7	4.4	4.4
80°	1.4	4.1	4.1	4.1	3.7
82.5°	1.4	3.7	3.7	3.7	3.0
85°	1.4	3.4	3.4	3.4	2.7
87.5°	1.0	3.0	3.4	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	10.45	11.71	10.82	12.02	12.34
	3H	0.00	0.00	0.00	0.00	0.34	10.53	11.65	10.91	11.98	12.34
	4H	0.00	0.70	0.07	1.05	1.43	10.61	11.65	11.02	12.00	12.38
	6H	0.67	1.62	1.09	1.99	2.39	10.72	11.66	11.13	12.04	12.43
	8H	1.17	2.07	1.60	2.46	2.86	10.77	11.67	11.20	12.06	12.47
	12H	1.74	2.60	2.18	2.98	3.42	10.85	11.71	11.28	12.09	12.52
4H	2H	0.00	0.49	0.00	0.84	1.22	10.31	11.34	10.71	11.70	12.08
	3H	1.78	2.63	2.19	3.03	3.43	10.48	11.33	10.90	11.73	12.14
	4H	3.16	3.92	3.60	4.34	4.78	10.64	11.39	11.07	11.81	12.26
	6H	4.25	4.91	4.72	5.35	5.82	10.86	11.51	11.33	11.96	12.43
	8H	4.72	5.33	5.19	5.78	6.25	10.98	11.59	11.45	12.04	12.51
	12H	5.22	5.76	5.71	6.25	6.72	11.16	11.69	11.64	12.18	12.65
8H	4H	4.13	4.74	4.60	5.19	5.66	10.63	11.24	11.10	11.69	12.16
	6H	5.66	6.16	6.16	6.65	7.14	10.97	11.47	11.48	11.97	12.45
	8H	6.43	6.88	6.95	7.40	7.89	11.20	11.65	11.72	12.17	12.66
	12H	7.24	7.64	7.76	8.14	8.71	11.53	11.93	12.05	12.43	13.00
12H	4H	4.31	4.84	4.79	5.33	5.80	10.62	11.16	11.11	11.64	12.12
	6H	5.97	6.42	6.49	6.94	7.43	10.99	11.44	11.52	11.96	12.45
	8H	6.92	7.32	7.44	7.82	8.39	11.30	11.70	11.81	12.19	12.76