

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055611

Luminaire Tested: S123R3DRP-S340D850-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055611  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123R3DRP-S340D850-X4F0-XX-UDD-F-B  
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

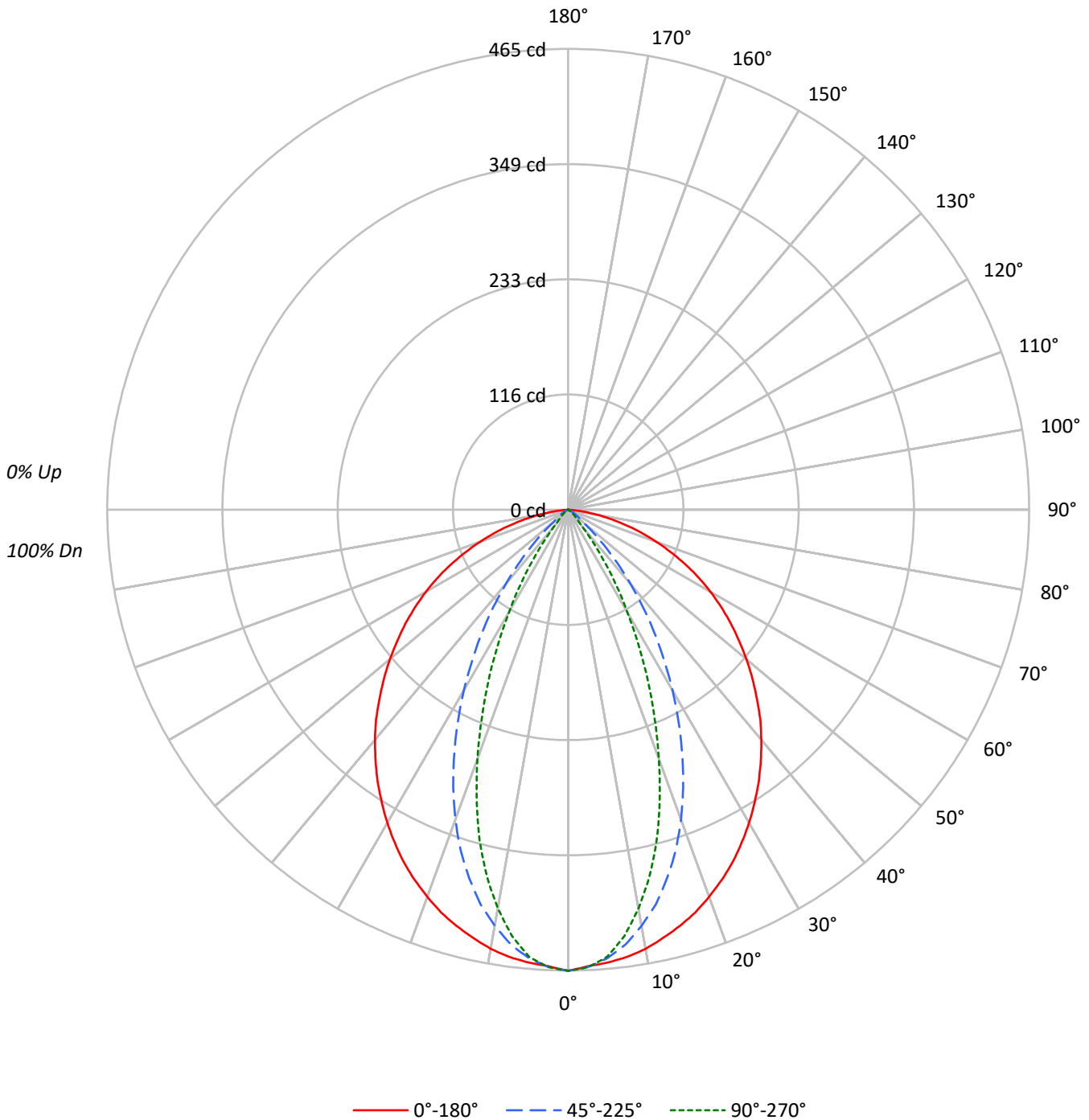
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 544.6 lumens  
Efficiency: N/A  
Efficacy: 43.2 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 12.6  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90				
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81				
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73				
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65				
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59				
6	81	70	63	57	79	69	62	57	67	61	57	66	61	56	64	60	56	54				
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50				
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43				
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40				

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

	0°	45°	90°
0°	5610	5610	5610
5°	5550	5497	5480
10°	5508	5218	5000
15°	5428	4808	4307
20°	5332	4267	3431
25°	5220	3616	2530
30°	5080	2930	1659
35°	4931	2231	910
40°	4770	1542	312
45°	4585	897	181
50°	4400	353	109
55°	4210	223	50
60°	3993	140	24
65°	3717	68	14
70°	3335	35	18
75°	2832	23	23
80°	2111	35	0
85°	802	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4585 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.7	7.8
10°-20°	108.3	19.9
20°-30°	129.1	23.7
30°-40°	109.6	20.1
40°-50°	74.5	13.7
50°-60°	46.1	8.5
60°-70°	23.4	4.3
70°-80°	9.5	1.8
80°-90°	1.5	0.3
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°	280.1	51.4
0°-40°	389.6	71.5
0°-60°	510.2	93.7
0°-90°	544.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	544.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	465	465	465	465	465	
5°	459	463	454	451	453	44
15°	435	424	385	355	345	123
25°	392	356	272	210	190	181
35°	335	269	152	82	62	209
45°	269	176	53	13	11	208
55°	200	89	11	4	2	179
65°	130	22	2	0	0	129
75°	61	4	0	0	0	65
85°	6	0	0	0	0	10
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	465.3	465.3	465.3	465.3	465.3
2.5°	461.0	467.3	461.9	461.5	461.9
5°	458.6	462.9	454.2	450.8	452.8
7.5°	455.2	457.1	442.6	433.9	433.9
10°	449.9	448.4	426.2	411.7	408.4
12.5°	442.6	436.8	407.9	385.2	378.9
15°	434.9	423.8	385.2	354.8	345.1
17.5°	426.2	409.3	360.6	321.0	307.0
20°	415.6	392.9	332.6	284.3	267.4
22.5°	404.5	375.1	303.1	246.7	227.8
25°	392.4	355.8	271.8	210.0	190.2
27.5°	378.9	335.5	240.9	174.7	153.0
30°	364.9	314.2	210.5	140.9	119.2
32.5°	350.0	292.0	180.0	110.1	89.8
35°	335.0	268.9	151.6	81.6	61.8
37.5°	319.1	245.7	124.1	56.5	39.1
40°	303.1	223.0	98.0	35.7	19.8
42.5°	286.7	199.4	74.3	17.9	13.5
45°	268.9	176.2	52.6	13.0	10.6
47.5°	252.0	154.0	34.8	10.6	8.2
50°	234.6	131.8	18.8	7.7	5.8
52.5°	217.2	110.5	13.5	5.8	3.9
55°	200.3	88.8	10.6	3.9	2.4
57.5°	182.9	70.0	8.2	2.4	1.4
60°	165.6	51.6	5.8	1.4	1.0
62.5°	148.2	35.7	3.9	1.0	0.5
65°	130.3	21.7	2.4	0.5	0.5
67.5°	112.0	15.0	1.4	0.5	0.5
70°	94.6	10.6	1.0	0.5	0.5
72.5°	77.2	6.8	0.5	0.5	0.0
75°	60.8	3.9	0.5	0.5	0.5
77.5°	44.9	1.4	0.5	0.5	0.0
80°	30.4	0.5	0.5	0.5	0.0
82.5°	16.9	0.0	0.5	0.5	0.0
85°	5.8	0.0	0.0	0.5	0.0
87.5°	0.0	0.0	0.0	0.5	0.0
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	15.04	16.32	15.40	16.63	16.95	0.00	0.00	0.00	0.00	0.00
	3H	16.98	18.12	17.36	18.45	18.81	0.00	0.00	0.00	0.00	0.00
	4H	17.81	18.87	18.22	19.22	19.60	0.00	0.00	0.00	0.00	0.00
	6H	18.37	19.33	18.78	19.71	20.10	0.00	0.00	0.00	0.00	0.00
	8H	18.49	19.41	18.92	19.80	20.20	0.00	0.00	0.00	0.00	0.00
	12H	18.52	19.39	18.95	19.77	20.21	0.00	0.00	0.00	0.00	0.00
4H	2H	14.80	15.86	15.21	16.21	16.59	0.00	0.00	0.00	0.00	0.00
	3H	16.76	17.62	17.17	18.02	18.43	0.00	0.00	0.00	0.00	0.00
	4H	17.57	18.34	18.01	18.76	19.20	0.00	0.00	0.00	0.00	0.00
	6H	18.17	18.83	18.63	19.28	19.75	0.00	0.00	0.00	0.00	0.00
	8H	18.32	18.94	18.79	19.39	19.86	0.00	0.00	0.00	0.00	0.00
	12H	18.37	18.91	18.86	19.40	19.87	0.00	0.00	0.00	0.00	0.00
8H	4H	17.43	18.05	17.90	18.49	18.96	0.00	0.00	0.00	0.00	0.00
	6H	18.01	18.51	18.51	19.01	19.49	0.00	0.00	0.00	0.00	0.00
	8H	18.16	18.61	18.68	19.12	19.62	0.00	0.00	0.00	0.00	0.00
	12H	18.22	18.61	18.73	19.11	19.68	0.00	0.00	0.00	0.00	0.00
12H	4H	17.38	17.92	17.87	18.41	18.88	0.00	0.00	0.00	0.00	0.00
	6H	17.95	18.40	18.47	18.91	19.41	0.00	0.00	0.00	0.00	0.00
	8H	18.11	18.51	18.63	19.00	19.58	0.00	0.00	0.00	0.00	0.00