

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: P1055611

Luminaire Tested: S123R3DR-S340D850-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
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: S123R3DR-S340D850-X4F0-XX-UDD-FLL-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: -

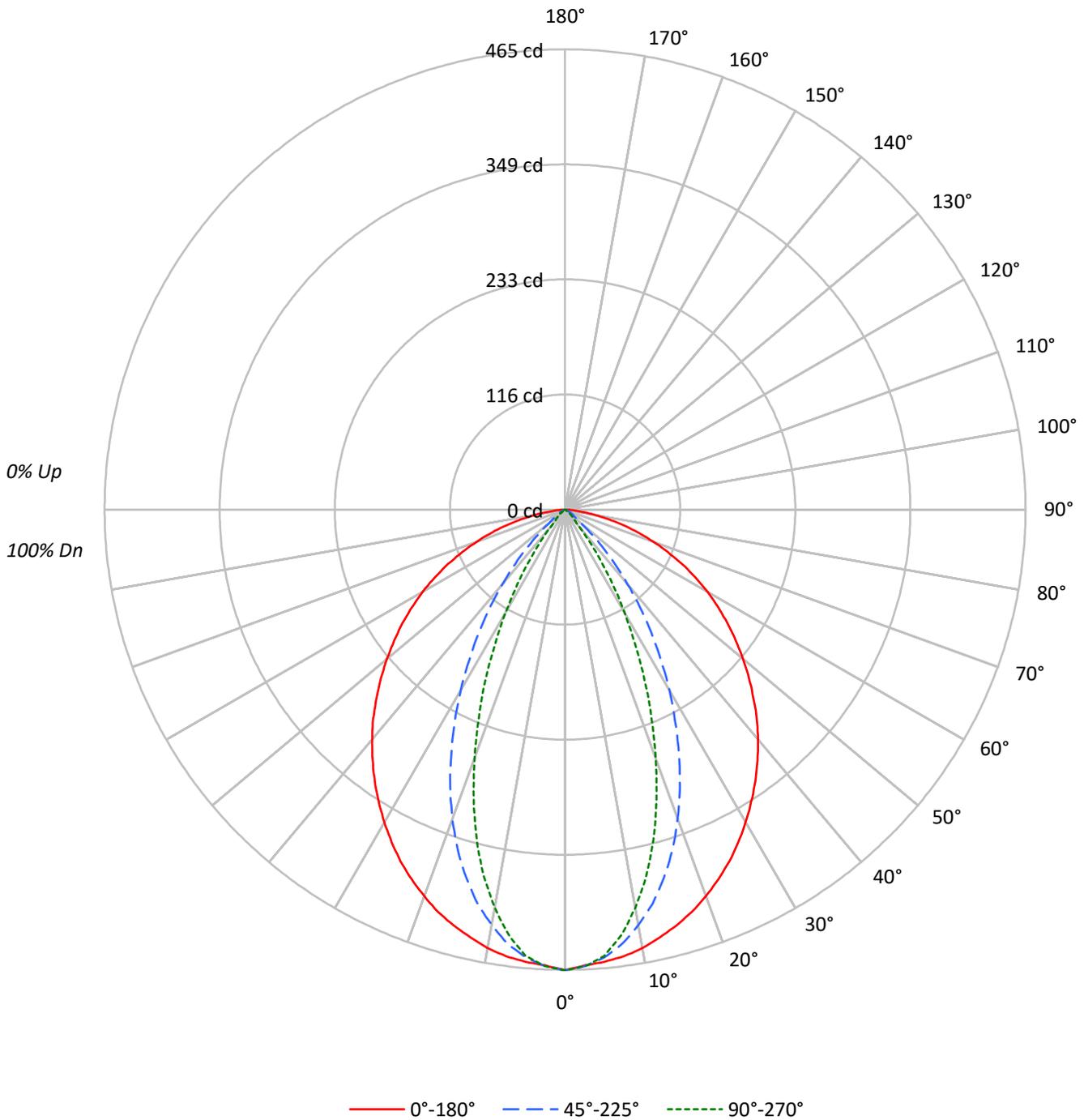
**Summary**

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 (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	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

(END OF REPORT)