

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: P1055638

Luminaire Tested: S123R3DR-S560D850-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055638  
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-S560D850-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: -

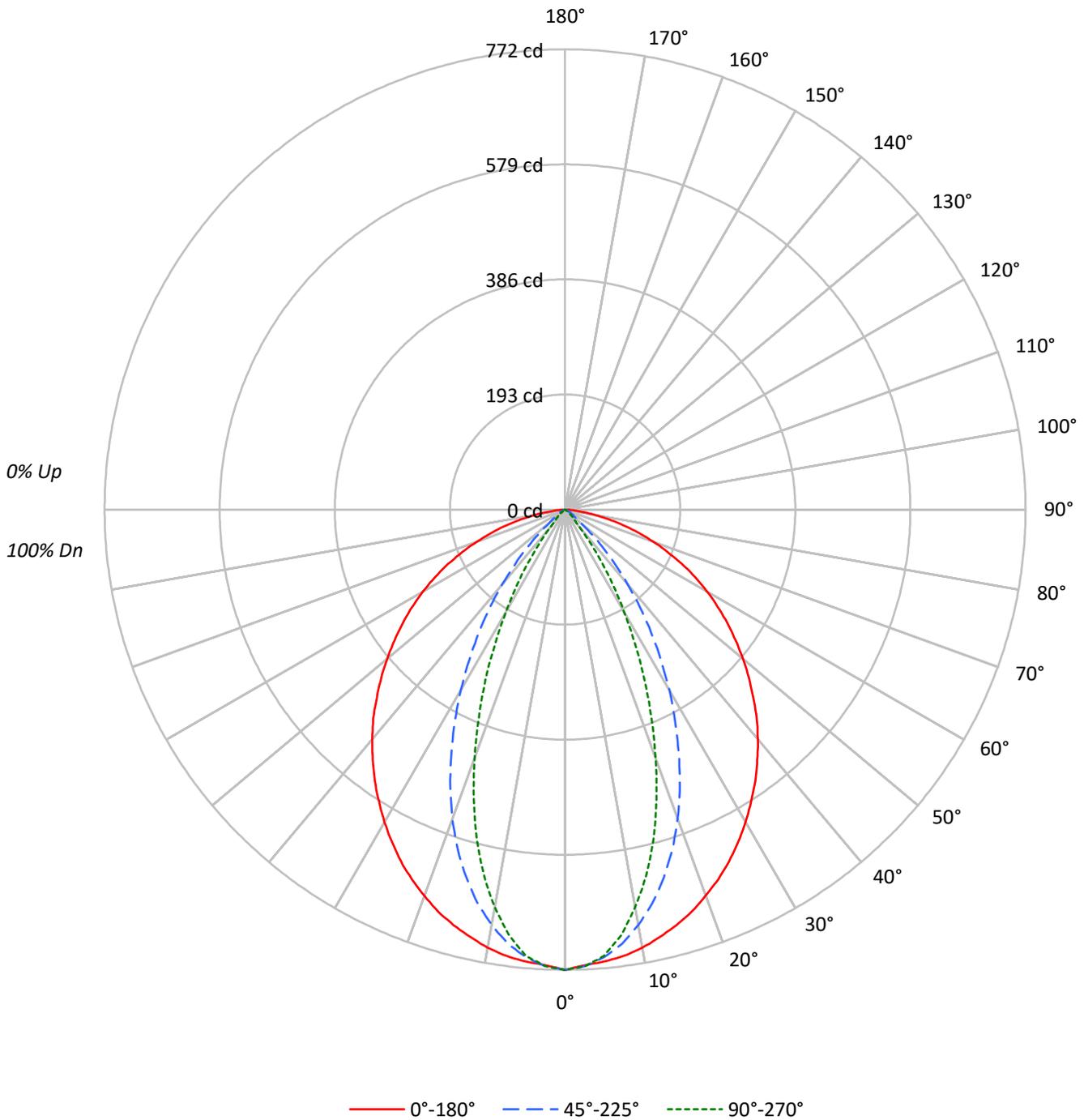
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 903.6 lumens  
Efficiency: N/A  
Efficacy: 47.3 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): 19.1  
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				100
1	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90				90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81				81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73				73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65				65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59				59
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56	54				54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50				50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43				43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40				40

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

	0°	45°	90°
0°	9308	9308	9308
5°	9208	9120	9091
10°	9138	8658	8294
15°	9007	7977	7147
20°	8846	7080	5693
25°	8661	5998	4197
30°	8428	4861	2754
35°	8180	3702	1509
40°	7915	2559	516
45°	7606	1488	300
50°	7300	585	180
55°	6987	370	84
60°	6624	231	39
65°	6168	114	23
70°	5534	56	28
75°	4700	37	37
80°	3506	56	0
85°	1328	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7606 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.8	7.8
10°-20°	179.6	19.9
20°-30°	214.3	23.7
30°-40°	181.8	20.1
40°-50°	123.5	13.7
50°-60°	76.6	8.5
60°-70°	38.8	4.3
70°-80°	15.8	1.8
80°-90°	2.4	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°	464.7	51.4
0°-40°	646.4	71.5
0°-60°	846.5	93.7
0°-90°	903.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	903.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	772	772	772	772	772	
5°	761	768	754	748	751	72
15°	722	703	639	589	573	203
25°	651	590	451	348	316	300
35°	556	446	252	135	102	347
45°	446	292	87	22	18	345
55°	332	147	18	6	4	297
65°	216	36	4	1	1	214
75°	101	6	1	1	1	107
85°	10	0	0	1	0	17
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	772.0	772.0	772.0	772.0	772.0
2.5°	764.8	775.2	766.4	765.6	766.4
5°	760.8	768.0	753.6	748.0	751.2
7.5°	755.2	758.4	734.4	720.0	720.0
10°	746.4	744.0	707.2	683.1	677.5
12.5°	734.4	724.8	676.7	639.1	628.7
15°	721.6	703.2	639.1	588.6	572.6
17.5°	707.2	679.1	598.2	532.6	509.3
20°	689.5	651.9	551.8	471.7	443.7
22.5°	671.1	622.3	502.9	409.2	378.0
25°	651.1	590.2	450.9	348.4	315.5
27.5°	628.7	556.6	399.6	289.9	253.9
30°	605.4	521.4	349.2	233.8	197.8
32.5°	580.6	484.5	298.7	182.6	149.0
35°	555.8	446.1	251.5	135.3	102.5
37.5°	529.4	407.6	205.8	93.7	64.9
40°	502.9	370.0	162.6	59.3	32.8
42.5°	475.7	330.8	123.3	29.6	22.4
45°	446.1	292.3	87.3	21.6	17.6
47.5°	418.0	255.5	57.7	17.6	13.6
50°	389.2	218.6	31.2	12.8	9.6
52.5°	360.4	183.4	22.4	9.6	6.4
55°	332.4	147.4	17.6	6.4	4.0
57.5°	303.5	116.1	13.6	4.0	2.4
60°	274.7	85.7	9.6	2.4	1.6
62.5°	245.9	59.3	6.4	1.6	0.8
65°	216.2	36.0	4.0	0.8	0.8
67.5°	185.8	24.8	2.4	0.8	0.8
70°	157.0	17.6	1.6	0.8	0.8
72.5°	128.1	11.2	0.8	0.8	0.0
75°	100.9	6.4	0.8	0.8	0.8
77.5°	74.5	2.4	0.8	0.8	0.0
80°	50.5	0.8	0.8	0.8	0.0
82.5°	28.0	0.0	0.8	0.8	0.0
85°	9.6	0.0	0.0	0.8	0.0
87.5°	0.0	0.0	0.0	0.8	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)