

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: P1055639

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

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055639  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)  
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-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

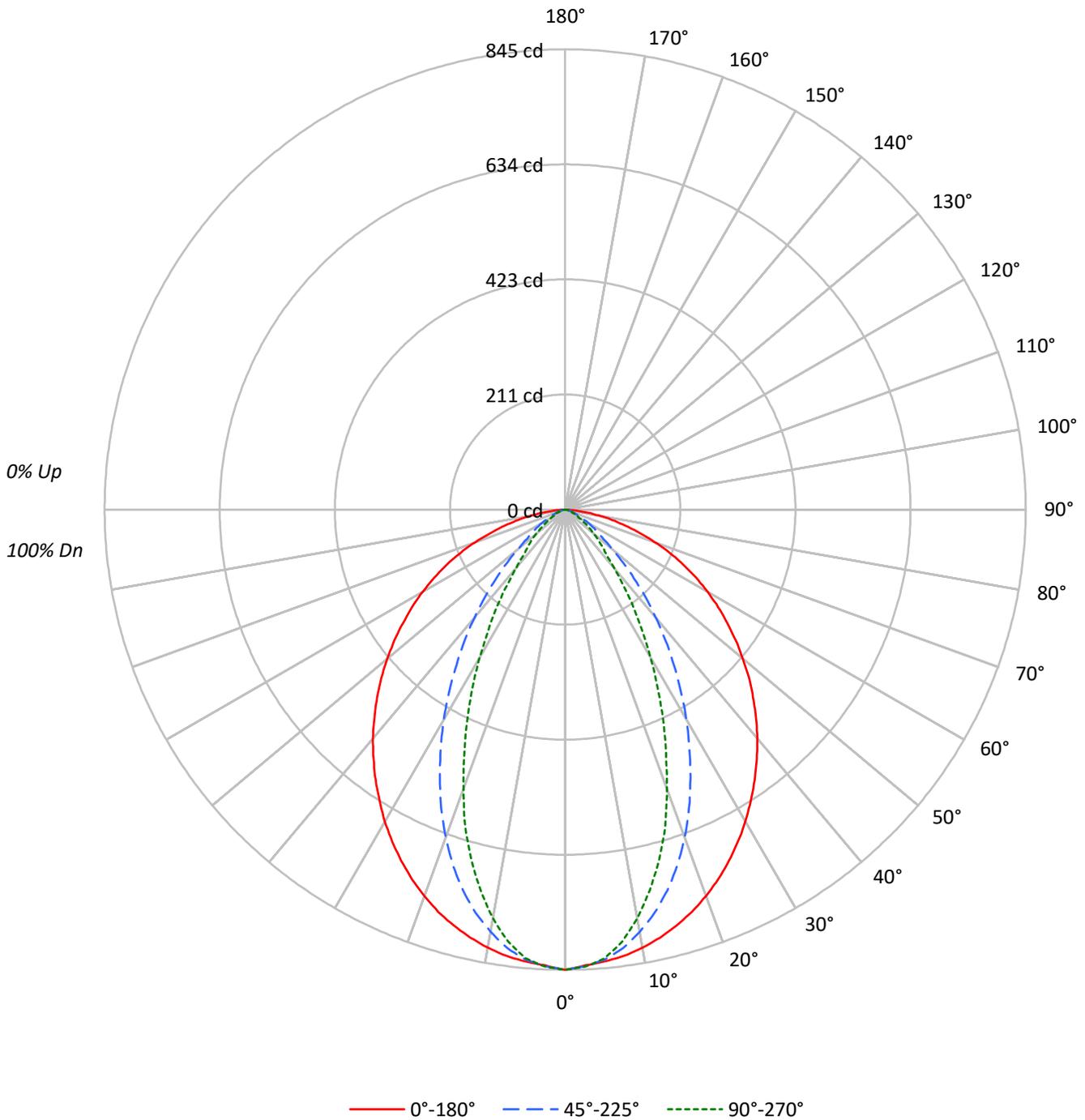
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1175.0 lumens  
Efficiency: N/A  
Efficacy: 61.5 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

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

	0°	45°	90°
0°	10186	10186	10186
5°	10080	10041	10012
10°	10001	9637	9334
15°	9866	9037	8307
20°	9689	8220	6998
25°	9461	7234	5647
30°	9209	6199	4348
35°	8922	5116	3217
40°	8634	4072	2192
45°	8315	3045	1652
50°	7977	2118	1292
55°	7626	1549	942
60°	7260	1160	675
65°	6832	776	525
70°	6183	564	423
75°	5334	410	335
80°	4284	333	278
85°	2213	332	221

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 8315 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	78.1	6.6
10°-20°	203.3	17.3
20°-30°	255.4	21.7
30°-40°	237.9	20.2
40°-50°	182.1	15.5
50°-60°	121.1	10.3
60°-70°	65.2	5.6
70°-80°	26.7	2.3
80°-90°	5.1	0.4
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°	536.8	45.7
0°-40°	774.7	65.9
0°-60°	1077.9	91.7
0°-90°	1175.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1175.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	845	845	845	845	845	
5°	833	842	830	826	827	79
15°	790	778	724	682	666	223
25°	711	663	544	453	424	327
35°	606	517	348	246	219	379
45°	488	360	179	105	97	376
55°	363	210	74	51	45	325
65°	240	81	27	20	18	237
75°	114	19	9	8	7	123
85°	16	2	2	2	2	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	844.9	844.9	844.9	844.9	844.9
2.5°	837.7	848.1	839.3	840.1	840.1
5°	832.9	841.7	829.7	826.5	827.3
7.5°	826.5	832.1	812.1	801.7	800.1
10°	816.9	818.5	787.2	768.8	762.4
12.5°	804.9	799.3	758.4	728.0	716.0
15°	790.4	777.6	724.0	681.5	665.5
17.5°	774.4	752.8	684.7	629.5	610.3
20°	755.2	724.8	640.7	571.8	545.4
22.5°	734.4	695.1	594.2	512.5	482.9
25°	711.2	663.1	543.8	453.3	424.5
27.5°	687.1	628.7	494.1	397.2	367.6
30°	661.5	593.4	445.3	342.8	312.3
32.5°	633.5	555.0	394.8	292.3	261.9
35°	606.2	516.6	347.6	245.9	218.6
37.5°	577.4	478.1	301.9	205.0	174.6
40°	548.6	438.9	258.7	165.0	139.3
42.5°	518.2	399.6	217.8	131.3	111.3
45°	487.7	360.4	178.6	104.9	96.9
47.5°	457.3	321.1	144.2	90.5	82.5
50°	425.3	283.5	112.9	76.9	68.9
52.5°	394.8	245.9	88.1	63.3	56.1
55°	362.8	209.8	73.7	51.3	44.8
57.5°	333.2	173.0	60.9	40.0	35.2
60°	301.1	140.1	48.1	31.2	28.0
62.5°	270.7	109.7	36.8	24.8	22.4
65°	239.5	80.9	27.2	20.0	18.4
67.5°	208.2	58.5	20.8	16.0	15.2
70°	175.4	44.0	16.0	12.8	12.0
72.5°	144.2	31.2	12.0	10.4	9.6
75°	114.5	19.2	8.8	8.0	7.2
77.5°	88.1	11.2	6.4	6.4	5.6
80°	61.7	6.4	4.8	4.8	4.0
82.5°	37.6	4.0	3.2	3.2	3.2
85°	16.0	2.4	2.4	2.4	1.6
87.5°	2.4	0.8	0.8	0.8	0.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)