

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: P1055630

Luminaire Tested: S123R3DR-S560D830-X4F0-XX-UDD-FLL-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055630  
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-S560D830-X4F0-XX-UDD-FLL-S  
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: -

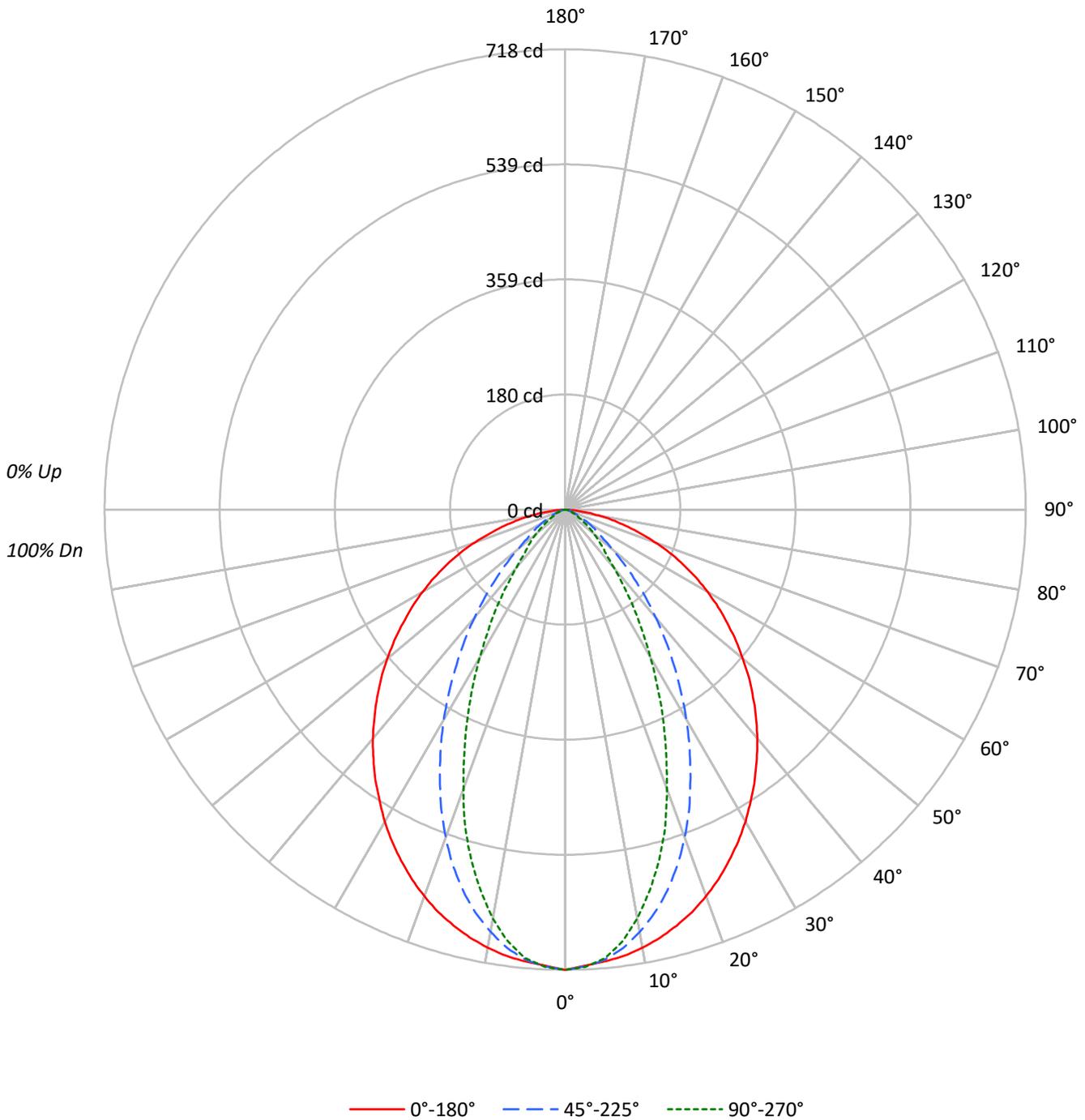
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 998.6 lumens  
Efficiency: N/A  
Efficacy: 52.3 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																		
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	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	63																												
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°	8658	8658	8658
5°	8567	8535	8509
10°	8500	8191	7933
15°	8385	7680	7060
20°	8236	6986	5947
25°	8040	6149	4798
30°	7827	5268	3696
35°	7584	4348	2735
40°	7337	3459	1863
45°	7067	2588	1405
50°	6779	1801	1097
55°	6480	1316	801
60°	6170	984	574
65°	5805	659	448
70°	5256	479	360
75°	4532	349	284
80°	3638	285	236
85°	1881	277	194

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 7067 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	66.4	6.6
10°-20°	172.8	17.3
20°-30°	217.1	21.7
30°-40°	202.2	20.2
40°-50°	154.8	15.5
50°-60°	102.9	10.3
60°-70°	55.4	5.6
70°-80°	22.7	2.3
80°-90°	4.3	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°	456.3	45.7
0°-40°	658.4	65.9
0°-60°	916.1	91.7
0°-90°	998.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	998.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	718	718	718	718	718	
5°	708	715	705	702	703	67
15°	672	661	615	579	566	189
25°	604	564	462	385	361	278
35°	515	439	295	209	186	322
45°	414	306	152	89	82	320
55°	308	178	63	44	38	276
65°	204	69	23	17	16	201
75°	97	16	8	7	6	104
85°	14	2	2	2	1	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	718.1	718.1	718.1	718.1	718.1
2.5°	712.0	720.8	713.3	714.0	714.0
5°	707.9	715.4	705.2	702.4	703.1
7.5°	702.4	707.2	690.2	681.3	680.0
10°	694.3	695.6	669.1	653.4	648.0
12.5°	684.1	679.3	644.6	618.7	608.5
15°	671.8	660.9	615.3	579.2	565.6
17.5°	658.2	639.8	582.0	535.0	518.7
20°	641.9	616.0	544.5	486.0	463.5
22.5°	624.2	590.8	505.0	435.6	410.4
25°	604.4	563.6	462.2	385.2	360.7
27.5°	584.0	534.3	420.0	337.6	312.4
30°	562.2	504.4	378.4	291.3	265.5
32.5°	538.4	471.7	335.6	248.4	222.6
35°	515.3	439.0	295.4	209.0	185.8
37.5°	490.7	406.3	256.6	174.2	148.4
40°	466.2	373.0	219.8	140.2	118.4
42.5°	440.4	339.6	185.1	111.6	94.6
45°	414.5	306.3	151.8	89.2	82.4
47.5°	388.7	272.9	122.5	76.9	70.1
50°	361.4	240.9	96.0	65.3	58.5
52.5°	335.6	209.0	74.9	53.8	47.6
55°	308.3	178.3	62.6	43.6	38.1
57.5°	283.1	147.0	51.7	34.0	29.9
60°	255.9	119.1	40.8	26.5	23.8
62.5°	230.1	93.2	31.3	21.1	19.1
65°	203.5	68.7	23.1	17.0	15.7
67.5°	177.0	49.7	17.7	13.6	12.9
70°	149.1	37.4	13.6	10.9	10.2
72.5°	122.5	26.5	10.2	8.8	8.2
75°	97.3	16.3	7.5	6.8	6.1
77.5°	74.9	9.5	5.4	5.4	4.8
80°	52.4	5.4	4.1	4.1	3.4
82.5°	32.0	3.4	2.7	2.7	2.7
85°	13.6	2.0	2.0	2.0	1.4
87.5°	2.0	0.7	0.7	0.7	0.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)