

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: P1059310

Luminaire Tested: S123RDR-S560D940-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059310  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S560D940-X4F0-XX-UDD-BVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

**Summary**

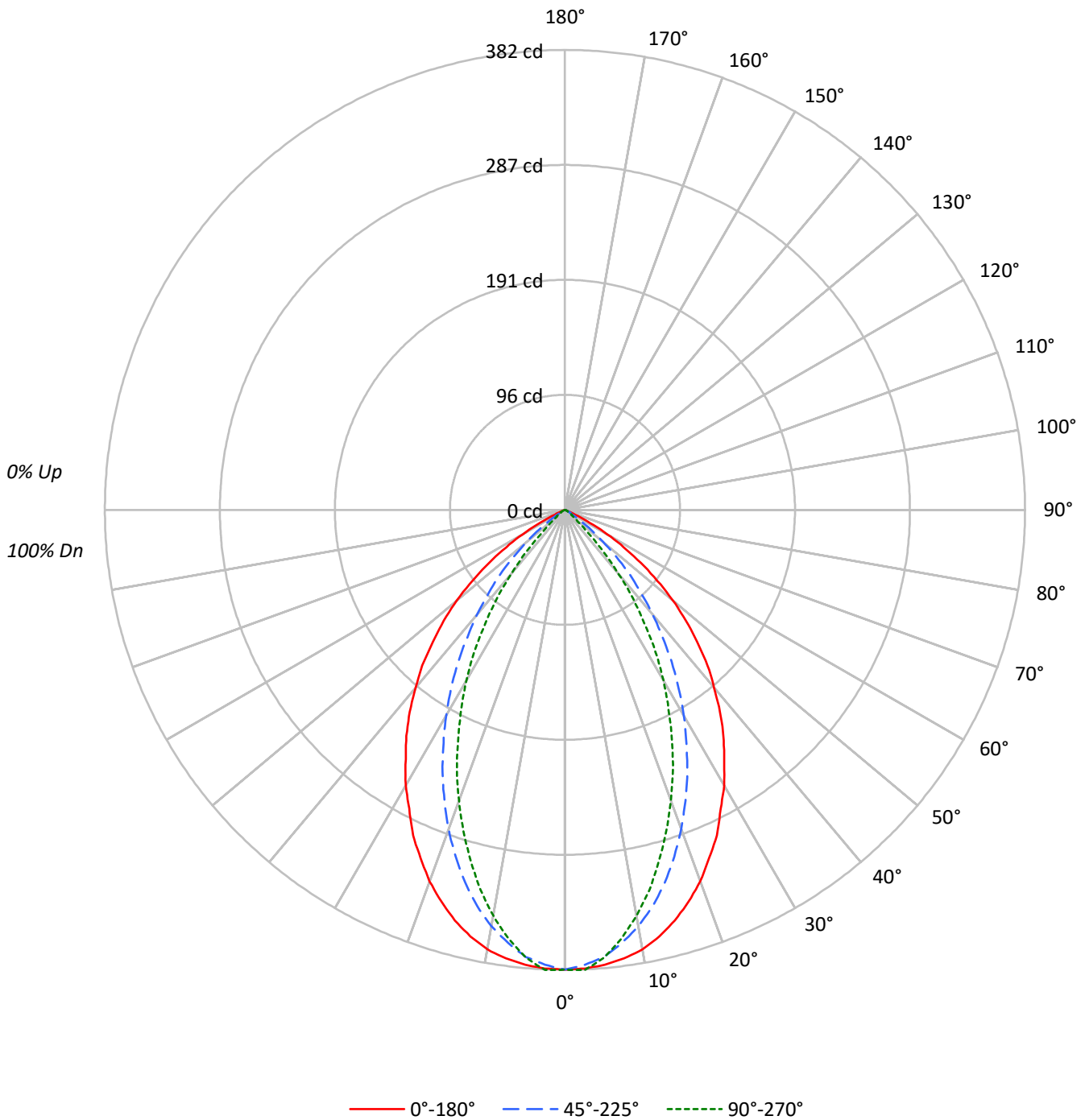
Lumens per Lamp: N/A  
Luminaire Lumens: 435.8 lumens  
Efficiency: N/A  
Efficacy: 22.2 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 19.6  
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				100
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92				92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84				84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76				76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69				69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63				63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58				58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53				53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49				49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46				46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42				42

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

	0°	45°	90°
0°	4484	4484	4484
5°	4472	4393	4400
10°	4421	4186	4084
15°	4291	3895	3670
20°	4104	3528	3213
25°	3865	3116	2717
30°	3585	2677	2218
35°	3288	2213	1649
40°	2951	1735	1056
45°	2574	1267	438
50°	2134	753	168
55°	1574	315	125
60°	953	115	73
65°	256	69	33
70°	0	21	21
75°	0	0	27
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 2574 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	35.2	8.1
10°-20°	90.7	20.8
20°-30°	113.1	25.9
30°-40°	101.1	23.2
40°-50°	63.8	14.6
50°-60°	26.7	6.1
60°-70°	5.0	1.2
70°-80°	0.2	0.0
80°-90°	0.0	0.0
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°	239.0	54.8
0°-40°	340.1	78.0
0°-60°	430.6	98.8
0°-90°	435.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	435.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	382	382	382	382	382	
5°	379	379	373	374	373	36
15°	353	344	320	307	302	99
25°	298	274	240	220	210	137
35°	229	196	154	127	115	143
45°	155	120	76	41	26	120
55°	77	53	15	6	6	69
65°	9	7	2	1	1	13
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	381.9	381.9	381.9	381.9	381.9
2.5°	381.3	381.9	378.2	381.9	382.5
5°	379.4	378.8	372.7	373.9	373.3
7.5°	375.7	373.9	362.8	360.4	359.1
10°	370.8	365.9	351.1	345.0	342.5
12.5°	362.8	356.1	337.0	327.2	323.5
15°	353.0	344.4	320.4	306.9	301.9
17.5°	341.3	329.0	301.9	287.2	279.8
20°	328.4	311.2	282.3	264.4	257.1
22.5°	313.0	294.0	261.4	242.3	234.3
25°	298.3	274.3	240.5	219.5	209.7
27.5°	279.8	254.6	218.3	196.8	186.3
30°	264.4	235.5	197.4	173.4	163.6
32.5°	246.0	215.9	175.9	149.4	140.2
35°	229.4	196.2	154.4	126.7	115.0
37.5°	211.5	177.1	132.8	103.9	92.9
40°	192.5	158.0	113.2	81.2	68.9
42.5°	175.3	139.0	93.5	60.3	48.0
45°	155.0	120.5	76.3	40.6	26.4
47.5°	136.5	103.3	57.8	22.8	14.1
50°	116.8	85.5	41.2	11.7	9.2
52.5°	96.6	68.3	27.1	8.0	7.4
55°	76.9	52.9	15.4	6.1	6.1
57.5°	57.8	38.1	8.0	4.9	4.3
60°	40.6	25.2	4.9	3.7	3.1
62.5°	23.4	14.8	3.7	2.5	2.5
65°	9.2	6.8	2.5	1.2	1.2
67.5°	0.6	1.8	1.2	0.6	0.6
70°	0.0	0.0	0.6	0.6	0.6
72.5°	0.0	0.0	0.6	0.6	0.6
75°	0.0	0.0	0.0	0.0	0.6
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)