

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: P1059149

Luminaire Tested: S123RDR-S1165D940-X4F0-XX-UDD-BVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059149  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-69)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S1165D940-X4F0-XX-UDD-BVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

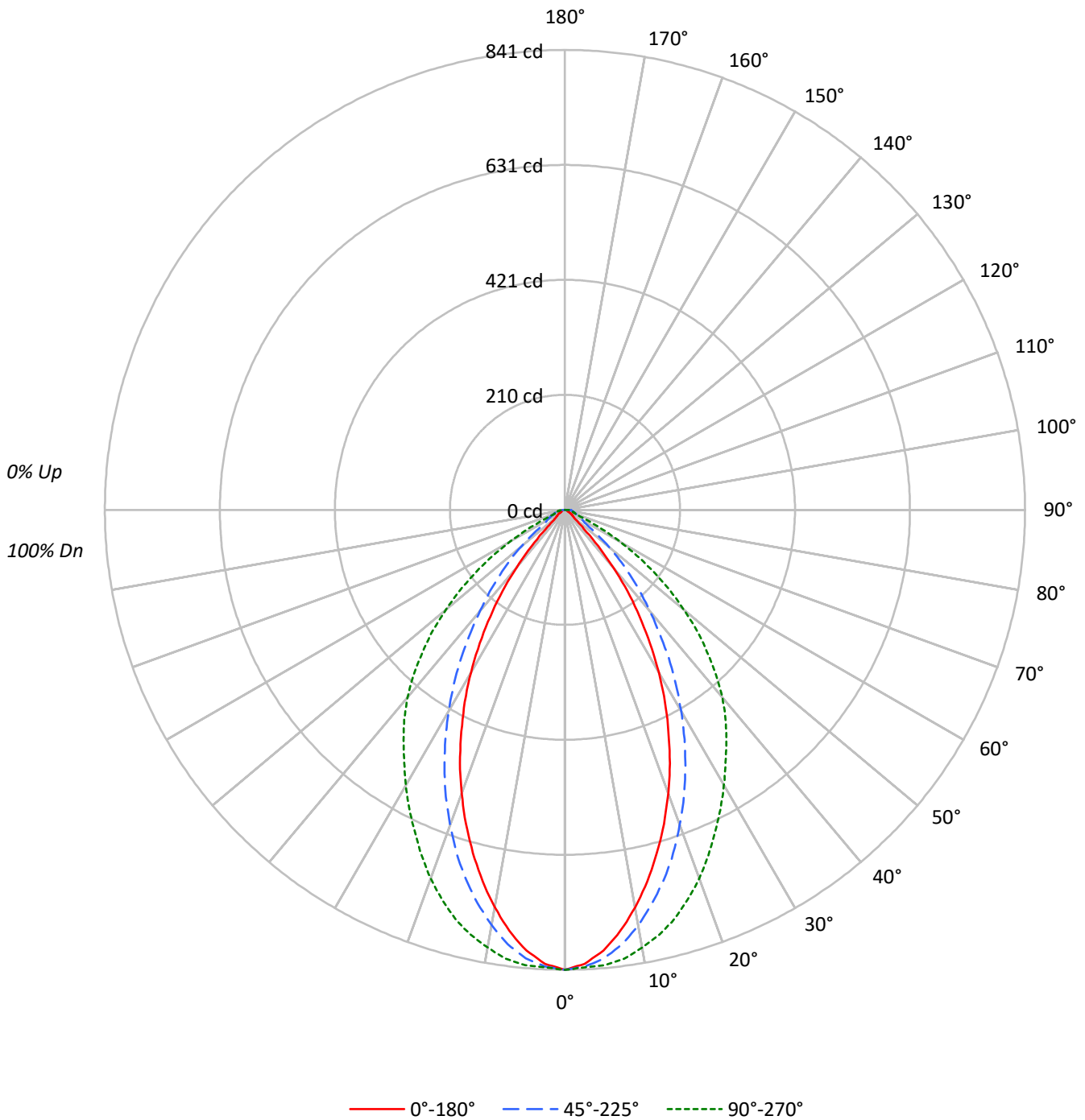
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1010.3 lumens  
Efficiency: N/A  
Efficacy: 24.2 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 41.8  
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	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	99	94	89	102	97	92	88	94	90	86	90	87	85	88	85	83	81				
3	98	90	84	79	96	89	83	78	86	81	77	83	79	76	81	78	75	73				
4	92	83	76	71	90	81	75	70	79	74	69	77	72	69	75	71	68	66				
5	86	76	69	64	84	75	68	64	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				
7	76	65	58	53	75	64	58	53	63	57	53	62	56	52	61	56	52	50				
8	72	61	54	49	70	60	53	49	59	53	48	58	52	48	57	52	48	46				
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43				
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	41	40				

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

	0°	45°	90°
0°	9877	9877	9877
5°	9535	9702	9853
10°	8802	9200	9691
15°	7896	8505	9412
20°	6894	7665	8967
25°	5798	6748	8415
30°	4656	5754	7882
35°	3410	4738	7374
40°	2109	3687	6860
45°	812	2777	6108
50°	400	1904	5168
55°	315	1052	4056
60°	211	876	2717
65°	178	786	1214
70°	175	707	707
75°	231	758	699
80°	345	953	784
85°	525	1563	1037

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 6108 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	77.1	7.6
10°-20°	197.4	19.5
20°-30°	245.0	24.3
30°-40°	219.5	21.7
40°-50°	144.3	14.3
50°-60°	72.3	7.2
60°-70°	28.5	2.8
70°-80°	16.0	1.6
80°-90°	10.1	1.0
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°	519.6	51.4
0°-40°	739.1	73.2
0°-60°	955.7	94.6
0°-90°	1010.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1010.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	841	841	841	841	841	
5°	809	822	823	828	836	75
15°	650	670	700	747	774	181
25°	448	476	521	594	650	205
35°	238	270	330	432	514	148
45°	49	81	167	282	368	46
55°	15	18	51	139	198	14
65°	6	18	28	36	44	6
75°	5	17	17	15	15	5
85°	4	12	12	12	8	4
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	841.1	841.1	841.1	841.1	841.1
2.5°	830.8	842.4	835.9	835.9	837.2
5°	808.9	821.8	823.1	828.2	835.9
7.5°	776.8	793.5	801.2	816.6	828.2
10°	738.2	756.2	771.6	798.6	812.8
12.5°	695.7	713.8	736.9	774.2	796.1
15°	649.5	670.0	699.6	747.2	774.2
17.5°	601.9	622.4	658.5	712.5	747.2
20°	551.7	574.9	613.4	675.2	717.6
22.5°	501.6	527.3	568.4	635.3	684.2
25°	447.5	475.8	520.8	594.2	649.5
27.5°	396.1	425.7	473.3	553.0	616.0
30°	343.4	373.0	424.4	510.6	581.3
32.5°	289.4	322.8	376.8	470.7	546.6
35°	237.9	270.1	330.5	432.1	514.4
37.5°	187.8	219.9	282.9	394.8	482.3
40°	137.6	171.0	240.5	358.8	447.5
42.5°	90.0	124.7	203.2	322.8	409.0
45°	48.9	81.0	167.2	281.6	367.8
47.5°	27.0	43.7	135.0	243.1	327.9
50°	21.9	24.4	104.2	207.1	282.9
52.5°	18.0	20.6	74.6	172.3	241.8
55°	15.4	18.0	51.4	138.9	198.1
57.5°	12.9	15.4	41.2	106.7	155.6
60°	9.0	15.4	37.3	78.4	115.7
62.5°	7.7	15.4	32.2	54.0	77.2
65°	6.4	18.0	28.3	36.0	43.7
67.5°	5.1	18.0	24.4	23.1	23.1
70°	5.1	18.0	20.6	19.3	20.6
72.5°	5.1	19.3	19.3	18.0	18.0
75°	5.1	16.7	16.7	15.4	15.4
77.5°	5.1	15.4	15.4	14.1	14.1
80°	5.1	14.1	14.1	12.9	11.6
82.5°	5.1	12.9	12.9	11.6	10.3
85°	3.9	11.6	11.6	11.6	7.7
87.5°	3.9	10.3	11.6	10.3	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)