

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: P1059191

Luminaire Tested: S123RDR-S340D840-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

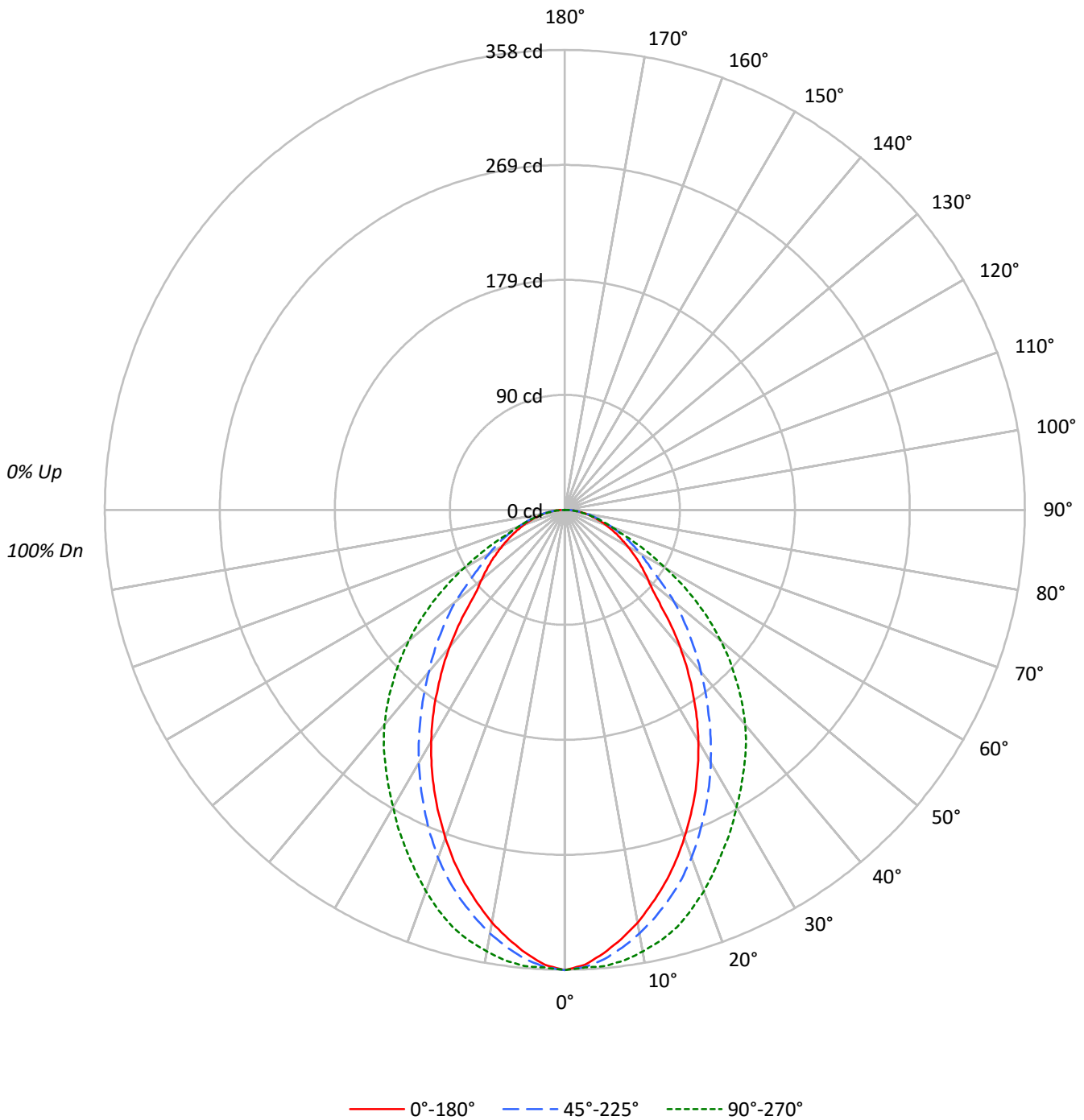
Test Method: LM-79-2019  
Report Number: P1059191  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67 )  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S340D840-X4F0-XX-UDD-WVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 647.2 lumens  
Efficiency: N/A  
Efficacy: 51.8 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1  
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 12.5  
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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87				
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75				
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65				
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57				
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51				
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45				
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41				
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31				

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

	0°	45°	90°
0°	4207	4207	4207
5°	4084	4140	4203
10°	3892	3992	4163
15°	3657	3815	4091
20°	3396	3601	3947
25°	3119	3347	3782
30°	2819	3081	3623
35°	2487	2800	3486
40°	2138	2525	3348
45°	1759	2273	3139
50°	1542	2026	2894
55°	1427	1728	2563
60°	1313	1588	2121
65°	1225	1459	1670
70°	1154	1325	1325
75°	1084	1220	1143
80°	1021	1109	967
85°	957	1078	741

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 3139 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.1	5.1
10°-20°	88.8	13.7
20°-30°	120.4	18.6
30°-40°	125.9	19.5
40°-50°	109.2	16.9
50°-60°	81.2	12.6
60°-70°	52.1	8.1
70°-80°	27.9	4.3
80°-90°	8.4	1.3
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°	242.4	37.4
0°-40°	368.3	56.9
0°-60°	558.7	86.3
0°-90°	647.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	647.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	358	358	358	358	358	
5°	346	352	351	354	357	32
15°	301	308	314	326	336	84
25°	241	248	258	276	292	110
35°	174	182	195	220	243	108
45°	106	114	137	166	189	83
55°	70	71	84	108	125	62
65°	44	48	52	56	60	44
75°	24	28	27	26	25	25
85°	7	9	8	7	6	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	358.3	358.3	358.3	358.3	358.3
2.5°	354.5	359.6	356.2	356.2	356.6
5°	346.5	352.4	351.2	353.7	356.6
7.5°	336.9	343.2	343.6	349.5	353.7
10°	326.4	332.7	334.8	343.2	349.1
12.5°	313.8	320.9	324.7	335.2	343.6
15°	300.8	307.9	313.8	326.4	336.5
17.5°	286.9	294.0	301.6	315.9	326.8
20°	271.8	279.3	288.2	302.4	315.9
22.5°	256.2	264.2	273.5	289.0	304.1
25°	240.7	248.3	258.3	275.6	291.9
27.5°	224.3	232.3	242.8	261.7	280.2
30°	207.9	215.9	227.2	247.4	267.2
32.5°	191.1	199.1	211.3	234.0	255.4
35°	173.5	181.9	195.3	220.1	243.2
37.5°	156.7	164.7	179.8	207.1	231.5
40°	139.5	147.9	164.7	194.1	218.4
42.5°	122.7	131.1	150.8	180.2	204.1
45°	105.9	113.8	136.9	166.3	189.0
47.5°	92.8	98.7	123.9	151.6	174.3
50°	84.4	86.5	110.9	137.4	158.4
52.5°	76.9	78.6	96.6	123.1	142.0
55°	69.7	71.4	84.4	108.4	125.2
57.5°	62.6	64.7	75.2	93.3	108.4
60°	55.9	58.4	67.6	79.8	90.3
62.5°	50.0	52.9	60.1	67.6	74.8
65°	44.1	47.9	52.5	55.9	60.1
67.5°	38.6	42.8	45.4	46.2	46.6
70°	33.6	37.8	38.6	38.6	38.6
72.5°	28.6	33.2	32.3	31.9	31.5
75°	23.9	27.7	26.9	25.6	25.2
77.5°	19.3	22.7	21.4	20.6	19.3
80°	15.1	17.6	16.4	15.5	14.3
82.5°	11.3	13.0	11.8	10.9	9.7
85°	7.1	8.8	8.0	6.7	5.5
87.5°	3.8	5.0	4.2	3.8	2.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)