

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P1059637

Luminaire Tested: S123RDR-H340D940-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059637
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D940-X4F0-XX-UDD-SVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

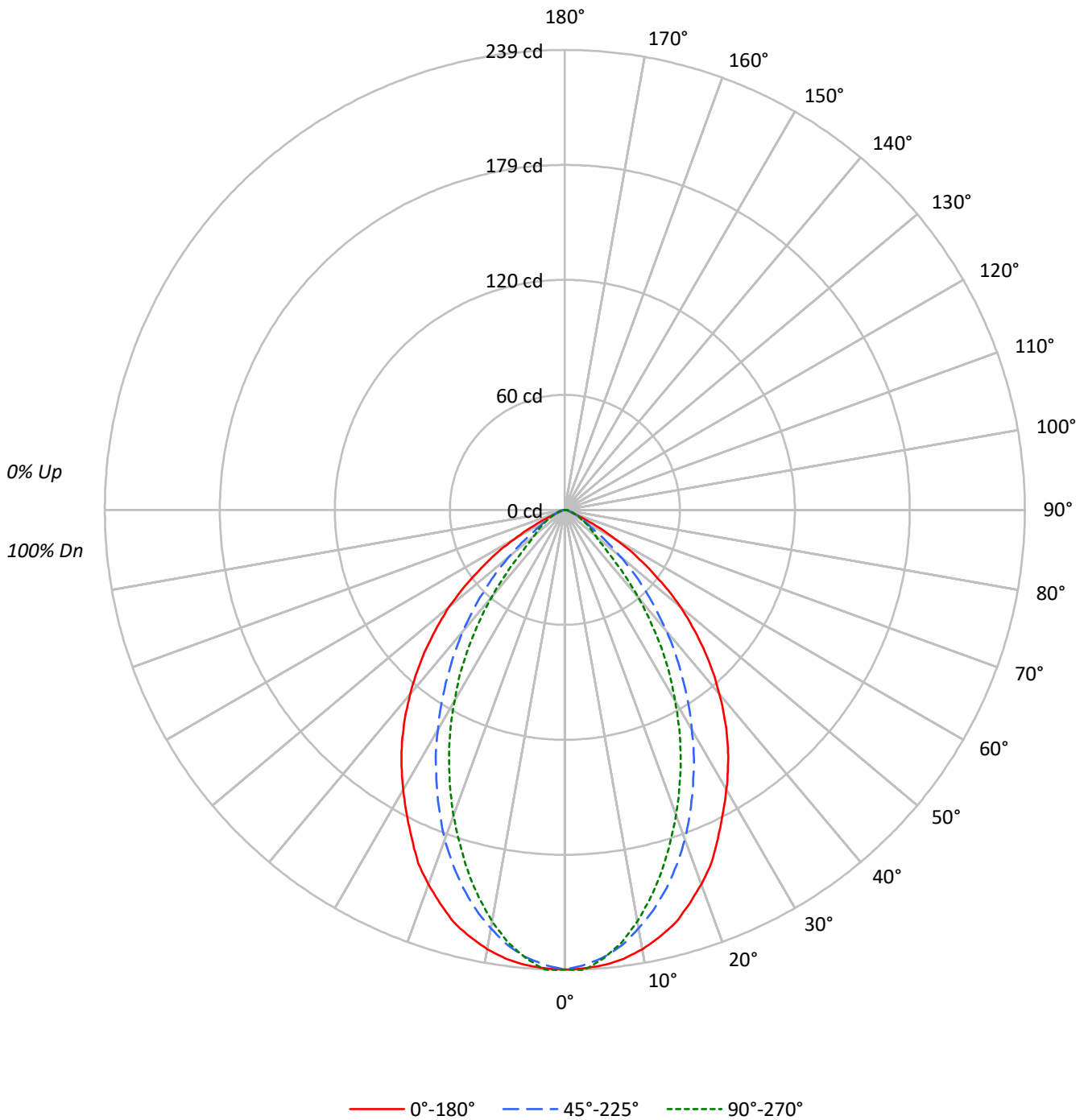
Lumens per Lamp: N/A
Luminaire Lumens: 308.4 lumens
Efficiency: N/A
Efficacy: 26.4 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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

TEST NUMBER: P1059637

CATALOG NUMBER: S123RDR-H340D940-X4F0-XX-UDD-SVL-B

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	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91				
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82				
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73				
4	92	83	76	71	90	82	75	71	79	74	70	77	73	69	75	71	68	66				
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55				
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				
9	67	56	49	45	66	56	49	44	55	49	44	54	48	44	53	48	44	42				
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2805	2805	2805
5°	2798	2750	2755
10°	2765	2633	2589
15°	2701	2476	2364
20°	2588	2278	2112
25°	2438	2041	1845
30°	2277	1790	1554
35°	2114	1527	1251
40°	1916	1258	907
45°	1689	976	546
50°	1432	681	371
55°	1089	409	311
60°	712	261	244
65°	297	194	194
70°	103	141	151
75°	82	100	118
80°	47	74	101
85°	54	54	94

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1689 cd/sqm



TEST NUMBER: P1059637

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.1	7.2
10°-20°	57.7	18.7
20°-30°	74.0	24.0
30°-40°	69.5	22.5
40°-50°	48.5	15.7
50°-60°	25.1	8.1
60°-70°	8.6	2.8
70°-80°	2.4	0.8
80°-90°	0.5	0.2
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°	153.8	49.9
0°-40°	223.3	72.4
0°-60°	296.9	96.3
0°-90°	308.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	308.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	239	239	239	239	239	
5°	237	237	233	234	234	22
15°	222	217	204	197	194	62
25°	188	176	158	147	142	87
35°	148	129	106	93	87	92
45°	102	83	59	41	33	78
55°	53	40	20	16	15	48
65°	11	9	7	7	7	13
75°	2	2	2	3	3	2
85°	0	0	0	0	1	0
90°	0	0	0	0	0	

TEST NUMBER: P1059637

CATALOG NUMBER: S123RDR-H340D940-X4F0-XX-UDD-SVL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	238.9	238.9	238.9	238.9	238.9
2.5°	238.5	238.9	236.7	238.9	239.2
5°	237.4	237.0	233.3	234.4	233.7
7.5°	235.2	234.1	228.2	226.7	226.7
10°	231.9	229.6	220.8	218.2	217.1
12.5°	227.4	224.5	213.0	208.2	206.3
15°	222.2	216.7	203.7	197.1	194.5
17.5°	214.8	207.4	193.4	185.6	181.6
20°	207.1	197.8	182.3	173.1	169.0
22.5°	198.9	187.8	170.1	160.1	155.7
25°	188.2	176.4	157.5	146.8	142.4
27.5°	177.9	165.3	145.3	133.1	128.7
30°	167.9	153.1	132.0	120.2	114.6
32.5°	157.9	141.3	119.4	106.5	101.3
35°	147.5	129.4	106.5	92.8	87.3
37.5°	136.4	118.0	94.3	79.5	72.8
40°	125.0	105.8	82.1	65.5	59.2
42.5°	113.5	94.7	69.9	52.9	45.5
45°	101.7	83.2	58.8	40.7	32.9
47.5°	89.9	71.7	48.1	29.6	24.8
50°	78.4	61.0	37.3	21.8	20.3
52.5°	65.8	50.7	28.1	18.1	17.7
55°	53.2	39.9	20.0	15.5	15.2
57.5°	42.2	31.1	14.4	12.9	12.6
60°	30.3	22.2	11.1	10.7	10.4
62.5°	20.0	15.2	8.9	8.5	8.5
65°	10.7	9.2	7.0	6.7	7.0
67.5°	4.4	5.2	5.2	5.5	5.5
70°	3.0	3.3	4.1	4.4	4.4
72.5°	2.2	2.6	3.0	3.3	3.3
75°	1.8	1.8	2.2	2.6	2.6
77.5°	1.1	1.5	1.5	1.8	2.2
80°	0.7	1.1	1.1	1.5	1.5
82.5°	0.4	0.7	0.7	1.1	1.1
85°	0.4	0.4	0.4	0.4	0.7
87.5°	0.0	0.0	0.0	0.0	0.4
90°	0.0	0.0	0.0	0.0	0.0

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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	9.92	11.18	10.29	11.50	11.81	3.41	4.67	3.77	4.98	5.29
	3H	9.88	10.99	10.26	11.32	11.68	4.17	5.28	4.55	5.61	5.98
	4H	9.82	10.85	10.23	11.20	11.59	4.38	5.41	4.78	5.76	6.14
	6H	9.75	10.70	10.17	11.07	11.46	4.52	5.46	4.93	5.83	6.23
	8H	9.71	10.60	10.14	10.99	11.40	4.55	5.45	4.99	5.84	6.24
	12H	9.67	10.52	10.10	10.90	11.33	4.57	5.42	5.00	5.80	6.23
4H	2H	9.77	10.80	10.17	11.15	11.54	3.66	4.69	4.07	5.04	5.43
	3H	9.76	10.59	10.17	11.00	11.40	4.56	5.40	4.98	5.80	6.21
	4H	9.70	10.44	10.14	10.86	11.31	4.84	5.58	5.27	6.00	6.44
	6H	9.64	10.28	10.11	10.73	11.20	5.05	5.69	5.52	6.14	6.61
	8H	9.59	10.19	10.06	10.63	11.11	5.11	5.71	5.59	6.16	6.63
	12H	9.55	10.07	10.03	10.55	11.03	5.15	5.67	5.64	6.16	6.63
8H	4H	9.59	10.18	10.06	10.63	11.10	4.82	5.42	5.29	5.86	6.34
	6H	9.52	10.01	10.03	10.51	10.99	5.09	5.57	5.59	6.07	6.56
	8H	9.47	9.91	10.00	10.43	10.92	5.20	5.63	5.72	6.15	6.64
	12H	9.44	9.82	9.95	10.32	10.89	5.27	5.65	5.79	6.15	6.72
12H	4H	9.54	10.07	10.03	10.55	11.03	4.78	5.31	5.27	5.79	6.27
	6H	9.47	9.90	9.99	10.42	10.91	5.05	5.49	5.58	6.00	6.50
	8H	9.44	9.82	9.95	10.32	10.89	5.19	5.57	5.71	6.07	6.64