

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: P1059589

Luminaire Tested: S123RDR-H340D840-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059589
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-H340D840-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

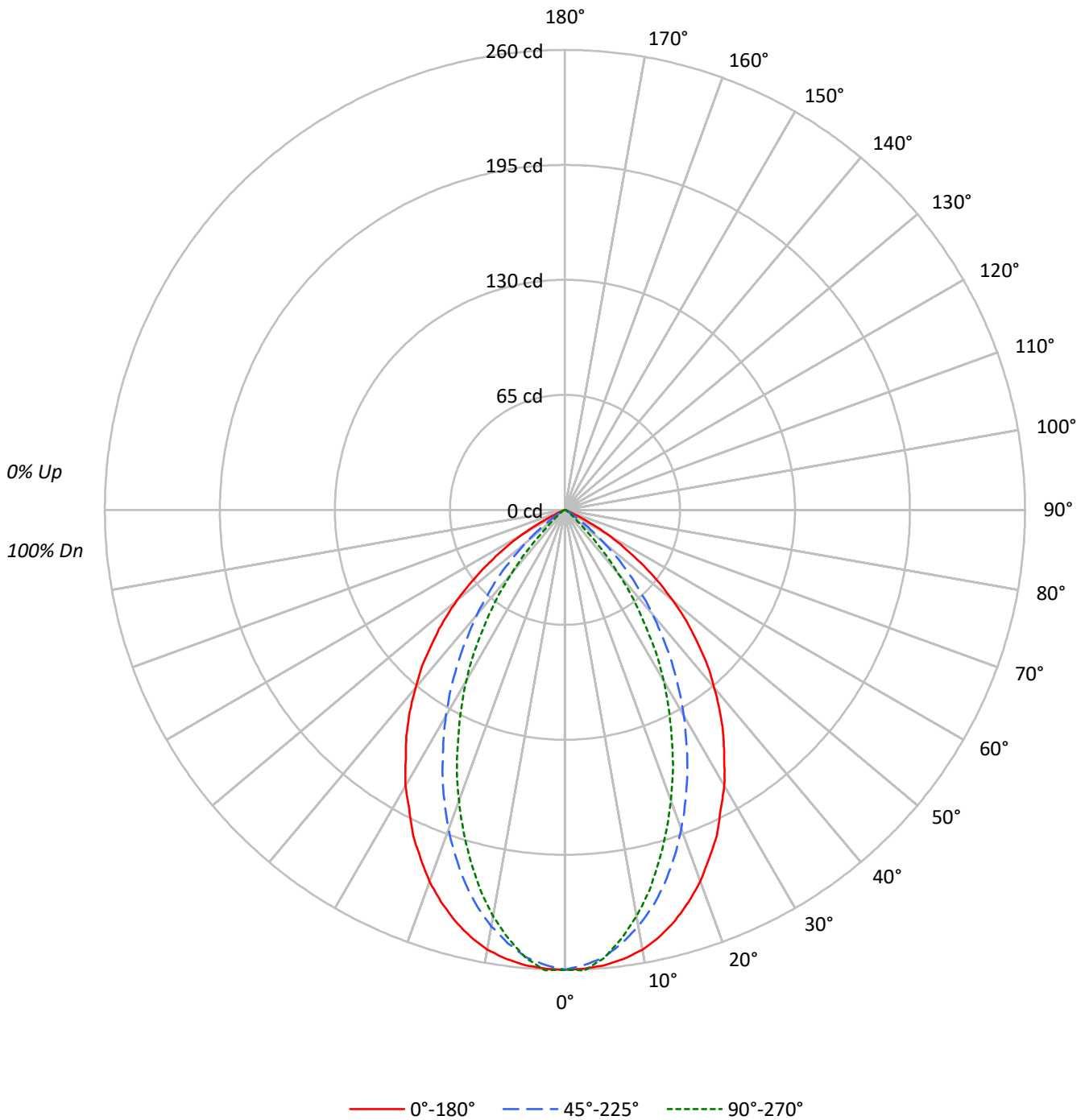
Lumens per Lamp: N/A
Luminaire Lumens: 296.7 lumens
Efficiency: N/A
Efficacy: 25.4 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P1059589

CATALOG NUMBER: S123RDR-H340D840-X4F0-XX-UDD-BVL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1059589

CATALOG NUMBER: S123RDR-H340D840-X4F0-XX-UDD-BVL-B

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3053	3053	3053
5°	3046	2992	2996
10°	3011	2851	2781
15°	2922	2653	2499
20°	2794	2402	2187
25°	2631	2121	1850
30°	2442	1822	1510
35°	2239	1507	1122
40°	2010	1180	719
45°	1752	862	299
50°	1454	513	115
55°	1071	215	86
60°	648	78	49
65°	175	47	22
70°	0	14	14
75°	0	0	18
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 1752 cd/sqm



TEST NUMBER: P1059589

CATALOG NUMBER: S123RDR-H340D840-X4F0-XX-UDD-BVL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.9	8.1
10°-20°	61.8	20.8
20°-30°	77.0	26.0
30°-40°	68.9	23.2
40°-50°	43.4	14.6
50°-60°	18.2	6.1
60°-70°	3.4	1.1
70°-80°	0.1	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°	162.7	54.8
0°-40°	231.6	78.0
0°-60°	293.2	98.8
0°-90°	296.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	296.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	260	260	260	260	260	
5°	258	258	254	255	254	24
15°	240	234	218	209	206	67
25°	203	187	164	150	143	93
35°	156	134	105	86	78	97
45°	106	82	52	28	18	81
55°	52	36	10	4	4	47
65°	6	5	2	1	1	9
75°	0	0	0	0	0	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	0



TEST NUMBER: P1059589

CATALOG NUMBER: S123RDR-H340D840-X4F0-XX-UDD-BVL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	260.0	260.0	260.0	260.0	260.0
2.5°	259.6	260.0	257.5	260.0	260.5
5°	258.4	257.9	253.8	254.6	254.2
7.5°	255.9	254.6	247.1	245.4	244.5
10°	252.5	249.2	239.1	234.9	233.2
12.5°	247.1	242.5	229.5	222.8	220.3
15°	240.4	234.5	218.2	209.0	205.6
17.5°	232.4	224.0	205.6	195.6	190.5
20°	223.6	211.9	192.2	180.1	175.0
22.5°	213.1	200.2	178.0	165.0	159.5
25°	203.1	186.8	163.7	149.5	142.8
27.5°	190.5	173.4	148.7	134.0	126.9
30°	180.1	160.4	134.4	118.1	111.4
32.5°	167.5	147.0	119.8	101.8	95.5
35°	156.2	133.6	105.1	86.3	78.3
37.5°	144.0	120.6	90.4	70.8	63.2
40°	131.1	107.6	77.0	55.3	46.9
42.5°	119.3	94.6	63.6	41.0	32.7
45°	105.5	82.1	51.9	27.6	18.0
47.5°	93.0	70.3	39.4	15.5	9.6
50°	79.6	58.2	28.1	8.0	6.3
52.5°	65.7	46.5	18.4	5.4	5.0
55°	52.3	36.0	10.5	4.2	4.2
57.5°	39.4	26.0	5.4	3.3	2.9
60°	27.6	17.2	3.3	2.5	2.1
62.5°	15.9	10.0	2.5	1.7	1.7
65°	6.3	4.6	1.7	0.8	0.8
67.5°	0.4	1.3	0.8	0.4	0.4
70°	0.0	0.0	0.4	0.4	0.4
72.5°	0.0	0.0	0.4	0.4	0.4
75°	0.0	0.0	0.0	0.0	0.4
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



TEST NUMBER: P1059589
 CATALOG NUMBER: S123RDR-H340D840-X4F0-XX-UDD-BVL-B

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	9.08	10.26	9.44	10.57	10.88	0.00	0.00	0.00	0.00	0.00
	3H	8.92	9.95	9.30	10.28	10.65	0.00	0.00	0.00	0.00	0.00
	4H	8.83	9.79	9.24	10.14	10.53	0.00	0.00	0.00	0.00	0.00
	6H	8.74	9.61	9.16	9.98	10.38	0.00	0.00	0.00	0.00	0.00
	8H	8.69	9.51	9.12	9.90	10.31	0.00	0.00	0.00	0.00	0.00
	12H	8.64	9.42	9.07	9.81	10.24	0.00	0.00	0.00	0.00	0.00
4H	2H	8.84	9.79	9.24	10.14	10.53	0.00	0.00	0.00	0.00	0.00
	3H	8.67	9.44	9.09	9.85	10.25	0.00	0.00	0.00	0.00	0.00
	4H	8.57	9.25	9.00	9.67	10.12	0.00	0.00	0.00	0.00	0.00
	6H	8.47	9.06	8.94	9.50	9.98	0.00	0.00	0.00	0.00	0.00
	8H	8.41	8.95	8.88	9.40	9.87	0.00	0.00	0.00	0.00	0.00
	12H	8.35	8.83	8.84	9.31	9.79	0.00	0.00	0.00	0.00	0.00
8H	4H	8.41	8.95	8.88	9.40	9.87	0.00	0.00	0.00	0.00	0.00
	6H	8.29	8.73	8.80	9.23	9.71	0.00	0.00	0.00	0.00	0.00
	8H	8.22	8.61	8.75	9.13	9.63	0.00	0.00	0.00	0.00	0.00
	12H	8.16	8.51	8.68	9.01	9.59	0.00	0.00	0.00	0.00	0.00
12H	4H	8.35	8.83	8.84	9.31	9.79	0.00	0.00	0.00	0.00	0.00
	6H	8.22	8.61	8.75	9.13	9.63	0.00	0.00	0.00	0.00	0.00
	8H	8.16	8.51	8.68	9.01	9.59	0.00	0.00	0.00	0.00	0.00