

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: P1059640

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059640
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D940-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

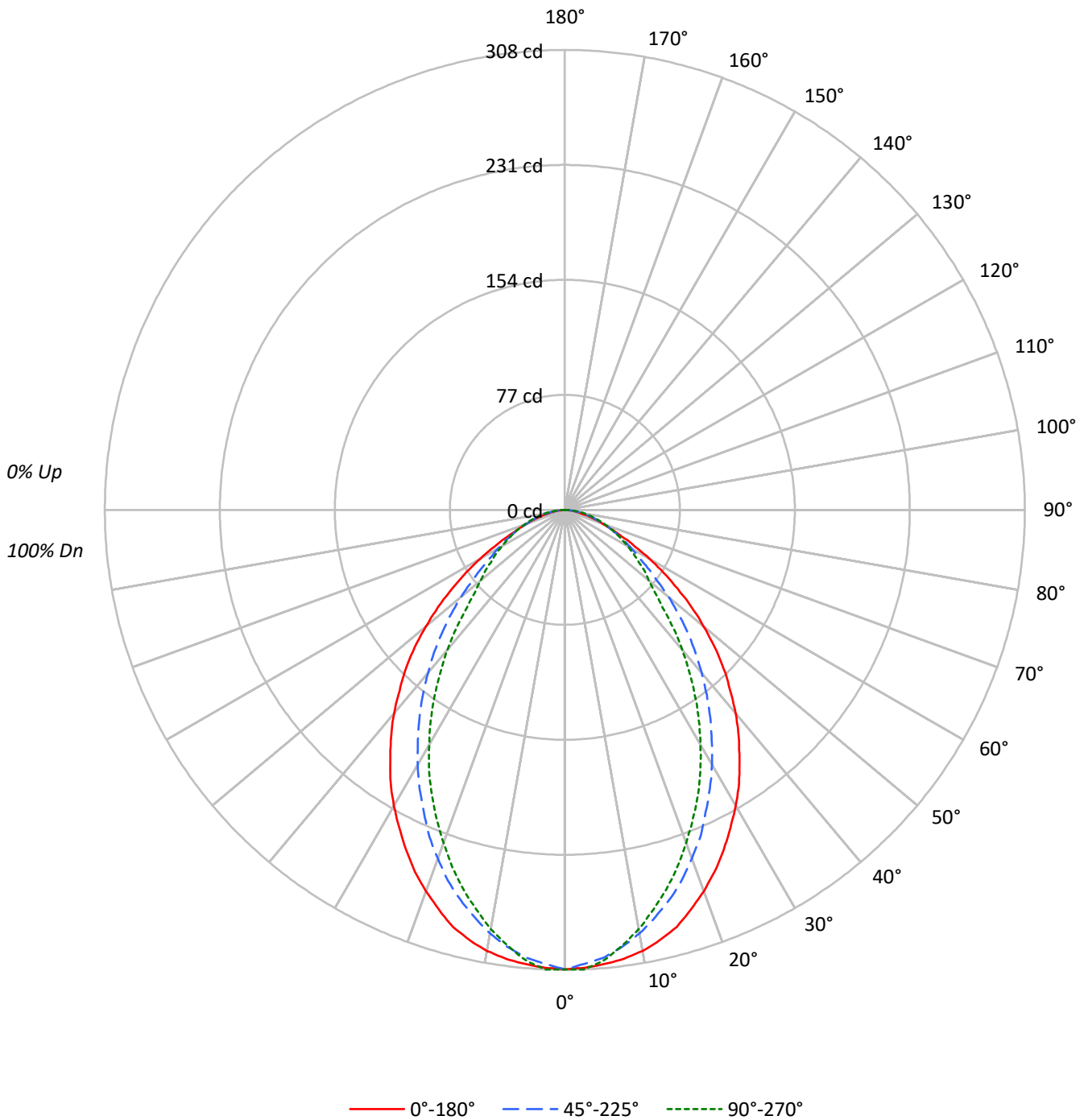
Lumens per Lamp: N/A
Luminaire Lumens: 538.1 lumens
Efficiency: N/A
Efficacy: 46.0 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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: P1059640

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

Luminous Intensity Polar Plot





TEST NUMBER: P1059640

CATALOG NUMBER: S123RDR-H340D940-X4F0-XX-UDD-WVL-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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3613	3613	3613
5°	3600	3548	3569
10°	3576	3435	3399
15°	3516	3286	3196
20°	3396	3105	2967
25°	3257	2893	2731
30°	3104	2672	2462
35°	2920	2433	2179
40°	2727	2183	1876
45°	2499	1928	1541
50°	2216	1655	1337
55°	1885	1386	1226
60°	1538	1207	1137
65°	1173	1070	1059
70°	913	951	989
75°	740	857	921
80°	548	703	852
85°	296	445	741

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2499 cd/sqm



TEST NUMBER: P1059640

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.6	5.3
10°-20°	76.8	14.3
20°-30°	104.5	19.4
30°-40°	108.3	20.1
40°-50°	91.3	17.0
50°-60°	64.8	12.0
60°-70°	39.6	7.4
70°-80°	19.7	3.7
80°-90°	4.5	0.8
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°	209.8	39.0
0°-40°	318.1	59.1
0°-60°	474.3	88.1
0°-90°	538.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	538.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	308	308	308	308	308	
5°	305	305	301	303	303	29
15°	289	284	270	266	263	81
25°	251	240	223	215	211	116
35°	204	188	170	158	152	127
45°	150	135	116	100	93	116
55°	92	82	68	62	60	83
65°	42	41	38	38	38	43
75°	16	17	19	20	20	18
85°	2	3	3	5	6	3
90°	0	0	0	0	0	



TEST NUMBER: P1059640

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	307.7	307.7	307.7	307.7	307.7
2.5°	306.9	307.3	304.3	307.7	308.0
5°	305.4	305.4	301.0	302.8	302.8
7.5°	303.2	302.5	295.1	295.1	294.3
10°	299.9	297.7	288.1	286.2	285.1
12.5°	295.1	291.4	279.5	276.2	274.0
15°	289.2	283.6	270.3	265.5	262.9
17.5°	280.7	275.1	260.3	253.7	250.7
20°	271.8	263.6	248.5	241.8	237.4
22.5°	262.2	251.8	237.0	228.9	224.1
25°	251.4	240.4	223.3	215.2	210.8
27.5°	240.0	227.8	210.4	201.2	196.7
30°	228.9	214.8	197.1	186.7	181.6
32.5°	217.1	201.2	183.0	172.3	167.1
35°	203.7	188.2	169.7	157.9	152.0
37.5°	191.2	175.3	156.0	143.5	136.8
40°	177.9	162.0	142.4	129.4	122.4
42.5°	163.8	148.6	129.4	114.3	107.6
45°	150.5	134.6	116.1	100.2	92.8
47.5°	136.1	121.3	103.2	86.9	81.7
50°	121.3	107.6	90.6	75.8	73.2
52.5°	106.9	95.4	78.0	68.4	67.3
55°	92.1	82.5	67.7	61.8	59.9
57.5°	78.4	71.4	58.1	55.1	54.4
60°	65.5	59.5	51.4	49.5	48.4
62.5°	52.9	49.5	44.7	44.0	43.3
65°	42.2	40.7	38.5	38.5	38.1
67.5°	33.3	33.3	32.9	33.6	33.3
70°	26.6	27.0	27.7	28.5	28.8
72.5°	21.1	22.2	22.9	24.0	24.4
75°	16.3	17.4	18.9	19.6	20.3
77.5°	11.8	12.9	14.4	15.5	16.3
80°	8.1	8.9	10.4	11.8	12.6
82.5°	5.2	5.5	6.7	8.1	8.9
85°	2.2	2.6	3.3	4.8	5.5
87.5°	0.0	0.0	0.4	1.5	2.6
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059640

CATALOG NUMBER: S123RDR-H340D940-X4F0-XX-UDD-WVL-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	13.27	14.72	13.64	15.04	15.35	11.37	12.82	11.73	13.13	13.45
	3H	14.17	15.47	14.55	15.80	16.16	12.94	14.24	13.32	14.56	14.93
	4H	14.45	15.67	14.85	16.02	16.40	13.54	14.75	13.94	15.10	15.48
	6H	14.60	15.72	15.02	16.09	16.48	13.99	15.10	14.40	15.47	15.87
	8H	14.63	15.69	15.05	16.08	16.48	14.14	15.20	14.56	15.59	15.99
	12H	14.62	15.64	15.05	16.02	16.45	14.23	15.25	14.67	15.63	16.06
4H	2H	13.52	14.73	13.92	15.08	15.46	11.91	13.12	12.31	13.47	13.85
	3H	14.63	15.63	15.04	16.03	16.44	13.68	14.68	14.09	15.09	15.49
	4H	15.02	15.92	15.46	16.34	16.78	14.39	15.29	14.83	15.71	16.15
	6H	15.26	16.04	15.72	16.48	16.95	14.97	15.74	15.43	16.19	16.65
	8H	15.30	16.03	15.77	16.48	16.95	15.16	15.89	15.62	16.33	16.80
	12H	15.31	15.96	15.80	16.44	16.91	15.30	15.94	15.78	16.42	16.90
8H	4H	15.18	15.91	15.64	16.35	16.82	14.60	15.33	15.07	15.78	16.24
	6H	15.49	16.09	15.99	16.58	17.06	15.28	15.88	15.78	16.37	16.85
	8H	15.57	16.10	16.08	16.62	17.10	15.54	16.07	16.05	16.59	17.07
	12H	15.60	16.08	16.11	16.57	17.14	15.74	16.22	16.26	16.71	17.28
12H	4H	15.18	15.83	15.67	16.31	16.78	14.60	15.25	15.09	15.73	16.20
	6H	15.51	16.04	16.02	16.55	17.04	15.29	15.83	15.81	16.34	16.83
	8H	15.62	16.09	16.13	16.59	17.15	15.59	16.07	16.10	16.56	17.13