

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: P1059587

Luminaire Tested: S123RDR-H340D835-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059587
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-H340D835-X4F0-XX-UDD-WVL-S
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

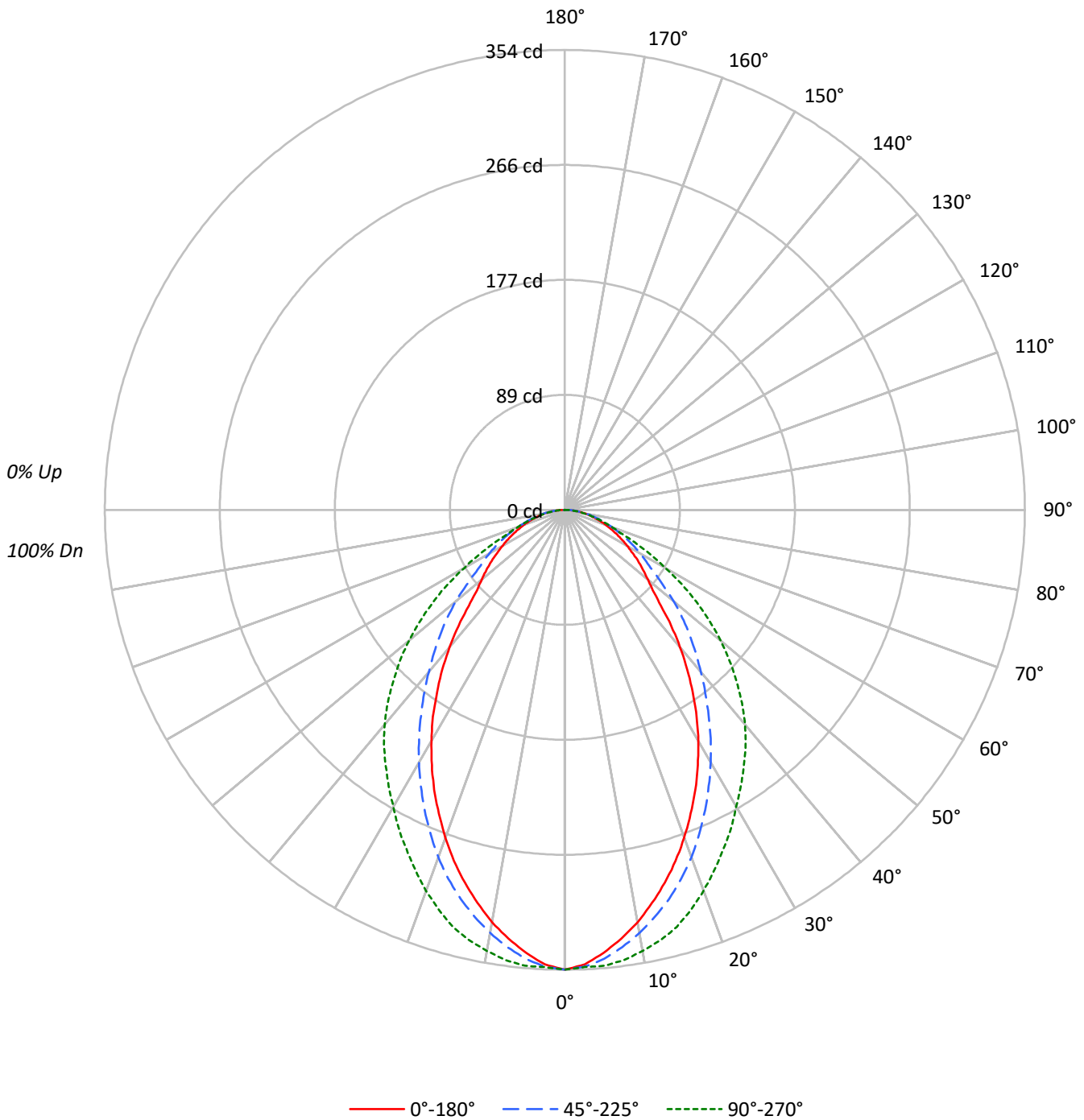
Lumens per Lamp: N/A
Luminaire Lumens: 639.4 lumens
Efficiency: N/A
Efficacy: 54.6 lumens/watt
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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: P1059587

CATALOG NUMBER: S123RDR-H340D835-X4F0-XX-UDD-WVL-S

Luminous Intensity Polar Plot





TEST NUMBER: P1059587

CATALOG NUMBER: S123RDR-H340D835-X4F0-XX-UDD-WVL-S

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°	4156	4156	4156
5°	4035	4089	4153
10°	3844	3943	4111
15°	3612	3769	4041
20°	3355	3556	3899
25°	3081	3306	3737
30°	2785	3044	3578
35°	2457	2765	3443
40°	2112	2494	3308
45°	1737	2247	3100
50°	1524	2000	2857
55°	1411	1707	2530
60°	1296	1569	2095
65°	1211	1442	1648
70°	1140	1312	1312
75°	1075	1207	1130
80°	1008	1095	953
85°	957	1064	728

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3100 cd/sqm



TEST NUMBER: P1059587

CATALOG NUMBER: S123RDR-H340D835-X4F0-XX-UDD-WVL-S

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.7	5.1
10°-20°	87.7	13.7
20°-30°	119.0	18.6
30°-40°	124.4	19.5
40°-50°	107.9	16.9
50°-60°	80.2	12.6
60°-70°	51.5	8.1
70°-80°	27.6	4.3
80°-90°	8.3	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°	239.4	37.4
0°-40°	363.8	56.9
0°-60°	551.9	86.3
0°-90°	639.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	639.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	354	354	354	354	354	
5°	342	348	347	349	352	32
15°	297	304	310	322	332	83
25°	238	245	255	272	288	109
35°	171	180	193	217	240	107
45°	105	112	135	164	187	82
55°	69	70	83	107	124	62
65°	44	47	52	55	59	43
75°	24	27	27	25	25	25
85°	7	9	8	7	5	8
90°	0	0	0	0	0	



TEST NUMBER: P1059587

CATALOG NUMBER: S123RDR-H340D835-X4F0-XX-UDD-WVL-S

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	353.9	353.9	353.9	353.9	353.9
2.5°	350.2	355.2	351.9	351.9	352.3
5°	342.3	348.1	346.9	349.4	352.3
7.5°	332.8	339.0	339.4	345.2	349.4
10°	322.4	328.6	330.7	339.0	344.8
12.5°	310.0	317.0	320.7	331.1	339.4
15°	297.1	304.1	310.0	322.4	332.4
17.5°	283.4	290.5	297.9	312.0	322.8
20°	268.5	275.9	284.6	298.8	312.0
22.5°	253.1	261.0	270.1	285.5	300.4
25°	237.8	245.2	255.2	272.2	288.4
27.5°	221.6	229.5	239.8	258.5	276.8
30°	205.4	213.3	224.5	244.4	263.9
32.5°	188.8	196.7	208.7	231.1	252.3
35°	171.4	179.7	192.9	217.4	240.2
37.5°	154.8	162.7	177.6	204.6	228.6
40°	137.8	146.1	162.7	191.7	215.8
42.5°	121.2	129.5	149.0	178.0	201.7
45°	104.6	112.4	135.3	164.3	186.7
47.5°	91.7	97.5	122.4	149.8	172.2
50°	83.4	85.5	109.5	135.7	156.4
52.5°	75.9	77.6	95.4	121.6	140.2
55°	68.9	70.5	83.4	107.1	123.6
57.5°	61.8	63.9	74.3	92.1	107.1
60°	55.2	57.7	66.8	78.8	89.2
62.5°	49.4	52.3	59.3	66.8	73.9
65°	43.6	47.3	51.9	55.2	59.3
67.5°	38.2	42.3	44.8	45.6	46.1
70°	33.2	37.3	38.2	38.2	38.2
72.5°	28.2	32.8	31.9	31.5	31.1
75°	23.7	27.4	26.6	25.3	24.9
77.5°	19.1	22.4	21.2	20.3	19.1
80°	14.9	17.4	16.2	15.4	14.1
82.5°	11.2	12.9	11.6	10.8	9.5
85°	7.1	8.7	7.9	6.6	5.4
87.5°	3.7	5.0	4.1	3.7	2.1
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059587
 CATALOG NUMBER: S123RDR-H340D835-X4F0-XX-UDD-WVL-S

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	11.73	13.22	12.10	13.53	13.85	14.49	15.97	14.86	16.29	16.60
	3H	13.44	14.77	13.82	15.10	15.46	15.51	16.84	15.89	17.17	17.53
	4H	14.11	15.35	14.51	15.70	16.08	15.88	17.12	16.28	17.47	17.85
	6H	14.61	15.76	15.02	16.12	16.52	16.13	17.28	16.54	17.65	18.04
	8H	14.78	15.88	15.21	16.27	16.67	16.20	17.30	16.63	17.69	18.09
	12H	14.91	15.96	15.34	16.34	16.77	16.24	17.29	16.67	17.67	18.10
4H	2H	12.51	13.76	12.91	14.11	14.49	14.76	16.01	15.16	16.36	16.74
	3H	14.44	15.47	14.85	15.87	16.27	16.02	17.05	16.43	17.45	17.85
	4H	15.25	16.18	15.68	16.59	17.03	16.50	17.43	16.94	17.85	18.29
	6H	15.89	16.70	16.35	17.14	17.60	16.88	17.69	17.34	18.14	18.60
	8H	16.11	16.87	16.58	17.31	17.78	17.00	17.75	17.46	18.20	18.66
	12H	16.29	16.96	16.77	17.44	17.91	17.07	17.74	17.55	18.22	18.69
8H	4H	15.57	16.32	16.03	16.77	17.23	16.70	17.45	17.16	17.90	18.36
	6H	16.36	16.98	16.86	17.48	17.95	17.18	17.81	17.68	18.30	18.78
	8H	16.69	17.25	17.20	17.76	18.25	17.36	17.92	17.87	18.43	18.92
	12H	16.97	17.46	17.48	17.95	18.52	17.49	17.99	18.00	18.48	19.05
12H	4H	15.59	16.27	16.07	16.75	17.22	16.71	17.38	17.19	17.86	18.34
	6H	16.41	16.97	16.93	17.48	17.97	17.22	17.78	17.74	18.29	18.78
	8H	16.81	17.30	17.32	17.80	18.36	17.45	17.95	17.96	18.44	19.00