

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: P1059112

Luminaire Tested: S123RDR-S1165D850-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059112
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-S1165D850-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

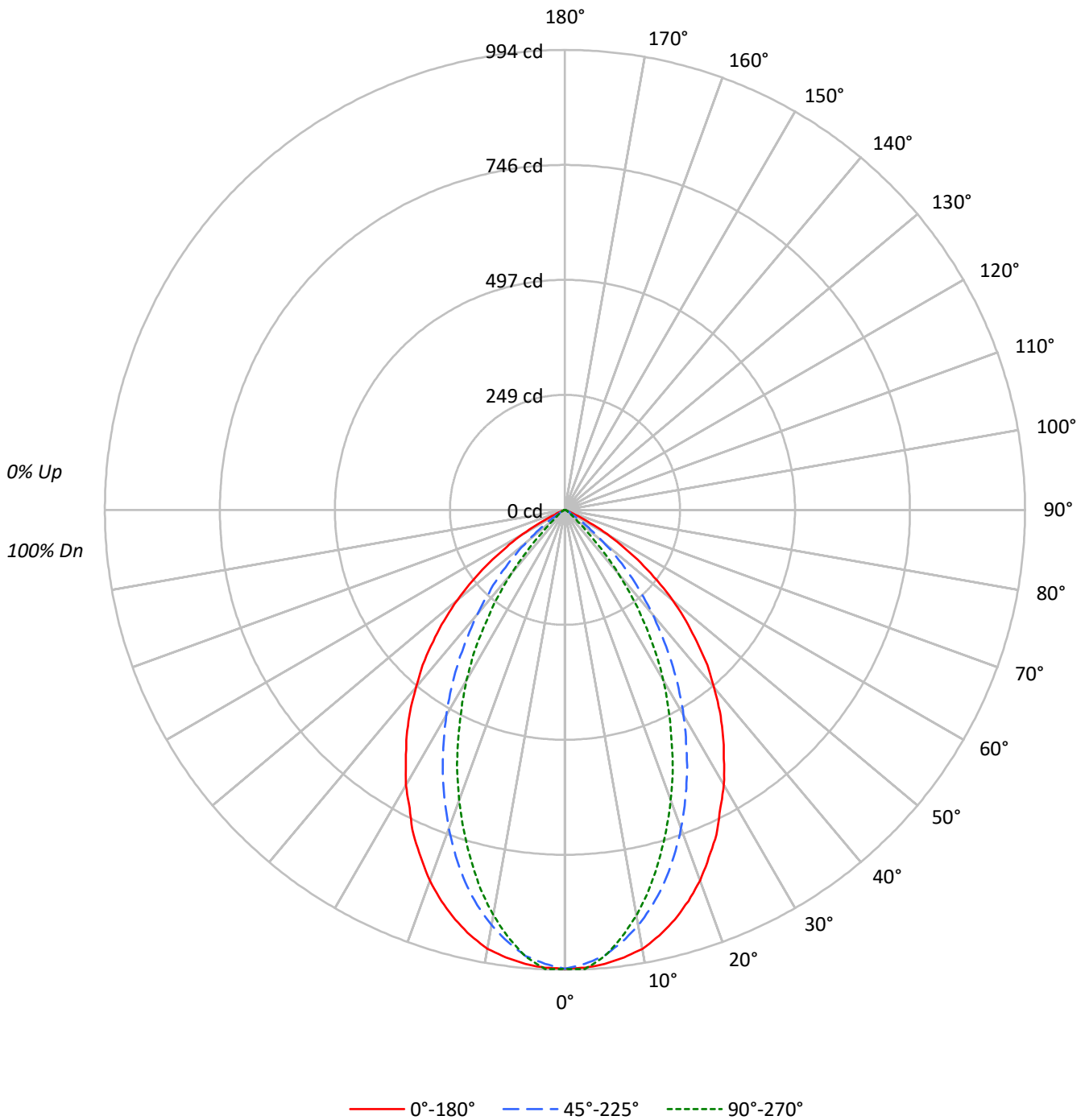
Lumens per Lamp: N/A
Luminaire Lumens: 1131.9 lumens
Efficiency: N/A
Efficacy: 27.1 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 41.8
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: P1059112

CATALOG NUMBER: S123RDR-S1165D850-X4F0-XX-UDD-BVL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1059112

CATALOG NUMBER: S123RDR-S1165D850-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°	11647	11647	11647
5°	11616	11410	11429
10°	11485	10875	10608
15°	11145	10117	9534
20°	10659	9162	8344
25°	10037	8091	7057
30°	9312	6952	5761
35°	8541	5747	4282
40°	7664	4505	2742
45°	6684	3290	1141
50°	5544	1955	438
55°	4088	817	328
60°	2475	301	188
65°	667	178	89
70°	0	55	55
75°	0	0	73
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6684 cd/sqm



TEST NUMBER: P1059112

CATALOG NUMBER: S123RDR-S1165D850-X4F0-XX-UDD-BVL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.3	8.1
10°-20°	235.7	20.8
20°-30°	293.7	25.9
30°-40°	262.6	23.2
40°-50°	165.7	14.6
50°-60°	69.4	6.1
60°-70°	13.1	1.2
70°-80°	0.4	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°	620.7	54.8
0°-40°	883.3	78.0
0°-60°	1118.4	98.8
0°-90°	1131.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1131.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	992	992	992	992	992	
5°	986	984	968	971	970	93
15°	917	894	832	797	784	257
25°	775	712	624	570	545	355
35°	596	510	401	329	299	371
45°	402	313	198	105	69	310
55°	200	137	40	16	16	179
65°	24	18	6	3	3	34
75°	0	0	0	0	2	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



TEST NUMBER: P1059112

CATALOG NUMBER: S123RDR-S1165D850-X4F0-XX-UDD-BVL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	991.9	991.9	991.9	991.9	991.9
2.5°	990.3	991.9	982.3	991.9	993.5
5°	985.5	983.9	968.0	971.1	969.6
7.5°	975.9	971.1	942.4	936.0	932.8
10°	963.2	950.4	912.1	896.1	889.7
12.5°	942.4	924.8	875.3	849.8	840.2
15°	916.8	894.5	832.2	797.0	784.3
17.5°	886.5	854.5	784.3	745.9	726.8
20°	853.0	808.2	733.2	686.8	667.7
22.5°	813.0	763.5	678.8	629.3	608.6
25°	774.7	712.4	624.5	570.2	544.7
27.5°	726.8	661.3	567.0	511.1	484.0
30°	686.8	611.8	512.7	450.4	424.9
32.5°	638.9	560.6	456.8	388.1	364.2
35°	595.8	509.5	400.9	329.0	298.7
37.5°	549.5	460.0	345.0	269.9	241.2
40°	500.0	410.5	293.9	210.8	178.9
42.5°	455.2	361.0	242.8	156.5	124.6
45°	402.5	313.1	198.1	105.4	68.7
47.5°	354.6	268.3	150.1	59.1	36.7
50°	303.5	222.0	107.0	30.3	24.0
52.5°	250.8	177.3	70.3	20.8	19.2
55°	199.7	137.4	39.9	16.0	16.0
57.5°	150.1	99.0	20.8	12.8	11.2
60°	105.4	65.5	12.8	9.6	8.0
62.5°	60.7	38.3	9.6	6.4	6.4
65°	24.0	17.6	6.4	3.2	3.2
67.5°	1.6	4.8	3.2	1.6	1.6
70°	0.0	0.0	1.6	1.6	1.6
72.5°	0.0	0.0	1.6	1.6	1.6
75°	0.0	0.0	0.0	0.0	1.6
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

(END OF REPORT)