

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: P1055584

Luminaire Tested: S123R3DR-S1165D850-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055584
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1165D850-X4F0-XX-UDD-FLL-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

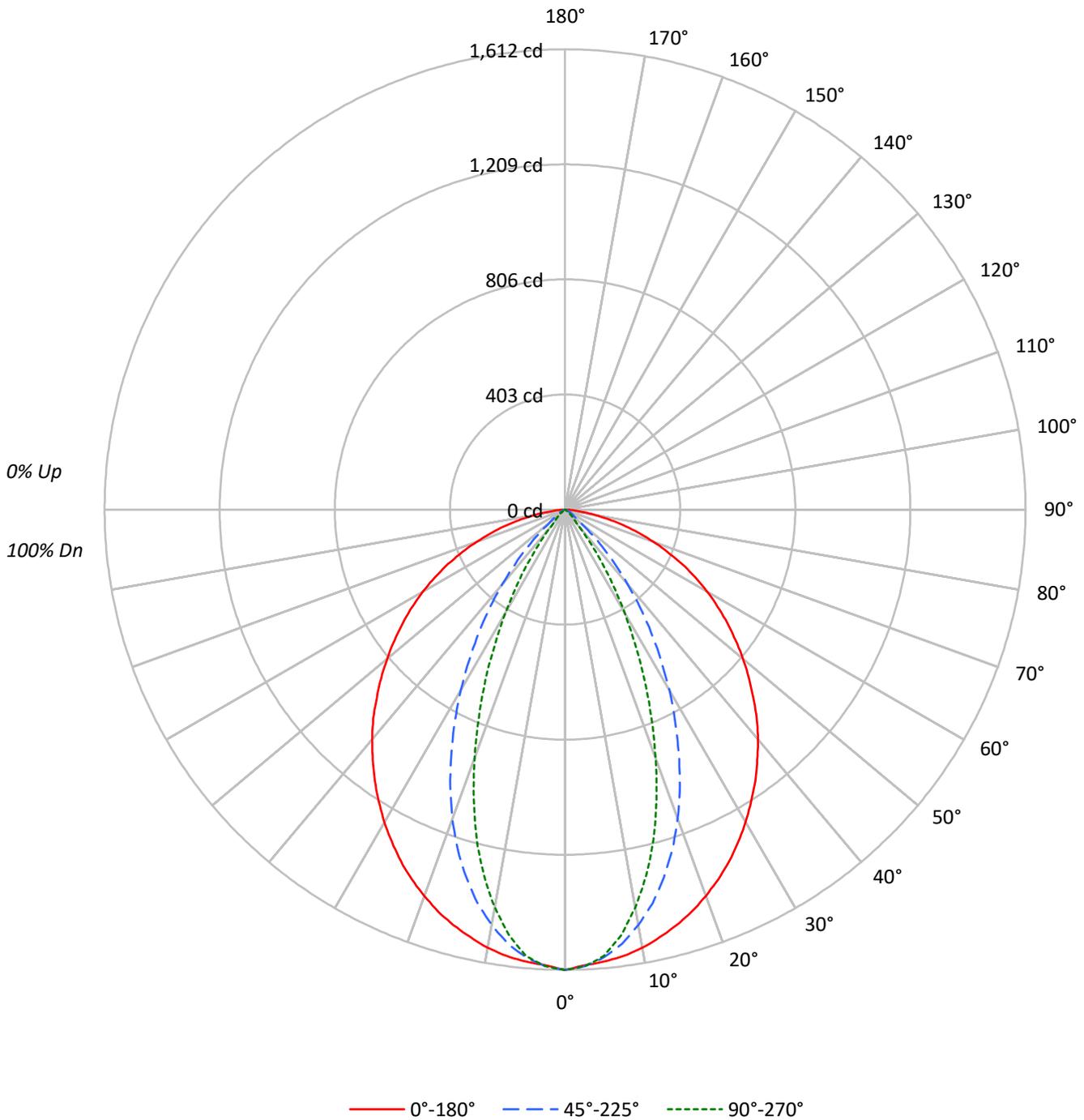
Lumens per Lamp: N/A
Luminaire Lumens: 1887.1 lumens
Efficiency: N/A
Efficacy: 45.0 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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: P1055584

CATALOG NUMBER: S123R3DR-S1165D850-X4F0-XX-UDD-FLL-B

Luminous Intensity Polar Plot





TEST NUMBER: P1055584

CATALOG NUMBER: S123R3DR-S1165D850-X4F0-XX-UDD-FLL-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	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	57	79	69	62	57	67	61	57	66	61	56	64	60	56	54
7	76	65	58	53	74	64	57	52	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	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19439	19439	19439
5°	19230	19048	18986
10°	19083	18081	17323
15°	18810	16659	14927
20°	18477	14785	11888
25°	18089	12526	8767
30°	17602	10152	5751
35°	17083	7730	3151
40°	16532	5343	1080
45°	15884	3108	627
50°	15247	1223	377
55°	14590	774	177
60°	13834	485	80
65°	12883	240	48
70°	11555	116	60
75°	9815	79	79
80°	7318	118	0
85°	2780	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15884 cd/sqm



TEST NUMBER: P1055584

CATALOG NUMBER: S123R3DR-S1165D850-X4F0-XX-UDD-FLL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.8	7.8
10°-20°	375.1	19.9
20°-30°	447.5	23.7
30°-40°	379.6	20.1
40°-50°	258.0	13.7
50°-60°	159.9	8.5
60°-70°	81.0	4.3
70°-80°	33.0	1.8
80°-90°	5.1	0.3
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°	970.5	51.4
0°-40°	1350.0	71.5
0°-60°	1767.9	93.7
0°-90°	1887.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1887.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1612	1612	1612	1612	1612	
5°	1589	1604	1574	1562	1569	151
15°	1507	1468	1335	1229	1196	425
25°	1360	1233	942	728	659	626
35°	1161	932	525	283	214	725
45°	932	610	182	45	37	720
55°	694	308	37	13	8	620
65°	452	75	8	2	2	446
75°	211	13	2	2	2	224
85°	20	0	0	2	0	36
90°	0	0	0	0	0	



TEST NUMBER: P1055584

CATALOG NUMBER: S123R3DR-S1165D850-X4F0-XX-UDD-FLL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1612.3	1612.3	1612.3	1612.3	1612.3
2.5°	1597.3	1619.0	1600.6	1598.9	1600.6
5°	1588.9	1604.0	1573.9	1562.2	1568.8
7.5°	1577.2	1583.9	1533.7	1503.6	1503.6
10°	1558.8	1553.8	1476.9	1426.7	1415.0
12.5°	1533.7	1513.6	1413.3	1334.7	1312.9
15°	1507.0	1468.5	1334.7	1229.3	1195.9
17.5°	1476.9	1418.3	1249.4	1112.2	1063.7
20°	1440.1	1361.4	1152.4	985.1	926.6
22.5°	1401.6	1299.6	1050.4	854.7	789.4
25°	1359.8	1232.7	941.6	727.6	659.0
27.5°	1312.9	1162.4	834.6	605.5	530.2
30°	1264.4	1088.8	729.2	488.4	413.1
32.5°	1212.6	1011.9	623.9	381.3	311.1
35°	1160.7	931.6	525.2	282.7	214.1
37.5°	1105.5	851.3	429.8	195.7	135.5
40°	1050.4	772.7	339.5	123.8	68.6
42.5°	993.5	690.8	257.6	61.9	46.8
45°	931.6	610.5	182.3	45.2	36.8
47.5°	873.1	533.5	120.4	36.8	28.4
50°	812.9	456.6	65.2	26.8	20.1
52.5°	752.6	383.0	46.8	20.1	13.4
55°	694.1	307.7	36.8	13.4	8.4
57.5°	633.9	242.5	28.4	8.4	5.0
60°	573.7	179.0	20.1	5.0	3.3
62.5°	513.5	123.8	13.4	3.3	1.7
65°	451.6	75.3	8.4	1.7	1.7
67.5°	388.0	51.8	5.0	1.7	1.7
70°	327.8	36.8	3.3	1.7	1.7
72.5°	267.6	23.4	1.7	1.7	0.0
75°	210.7	13.4	1.7	1.7	1.7
77.5°	155.5	5.0	1.7	1.7	0.0
80°	105.4	1.7	1.7	1.7	0.0
82.5°	58.5	0.0	1.7	1.7	0.0
85°	20.1	0.0	0.0	1.7	0.0
87.5°	0.0	0.0	0.0	1.7	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)