

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1439829

Luminaire Tested: S123DR-S485D935-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439829
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G3-2603-719-3)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DR-S485D935-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

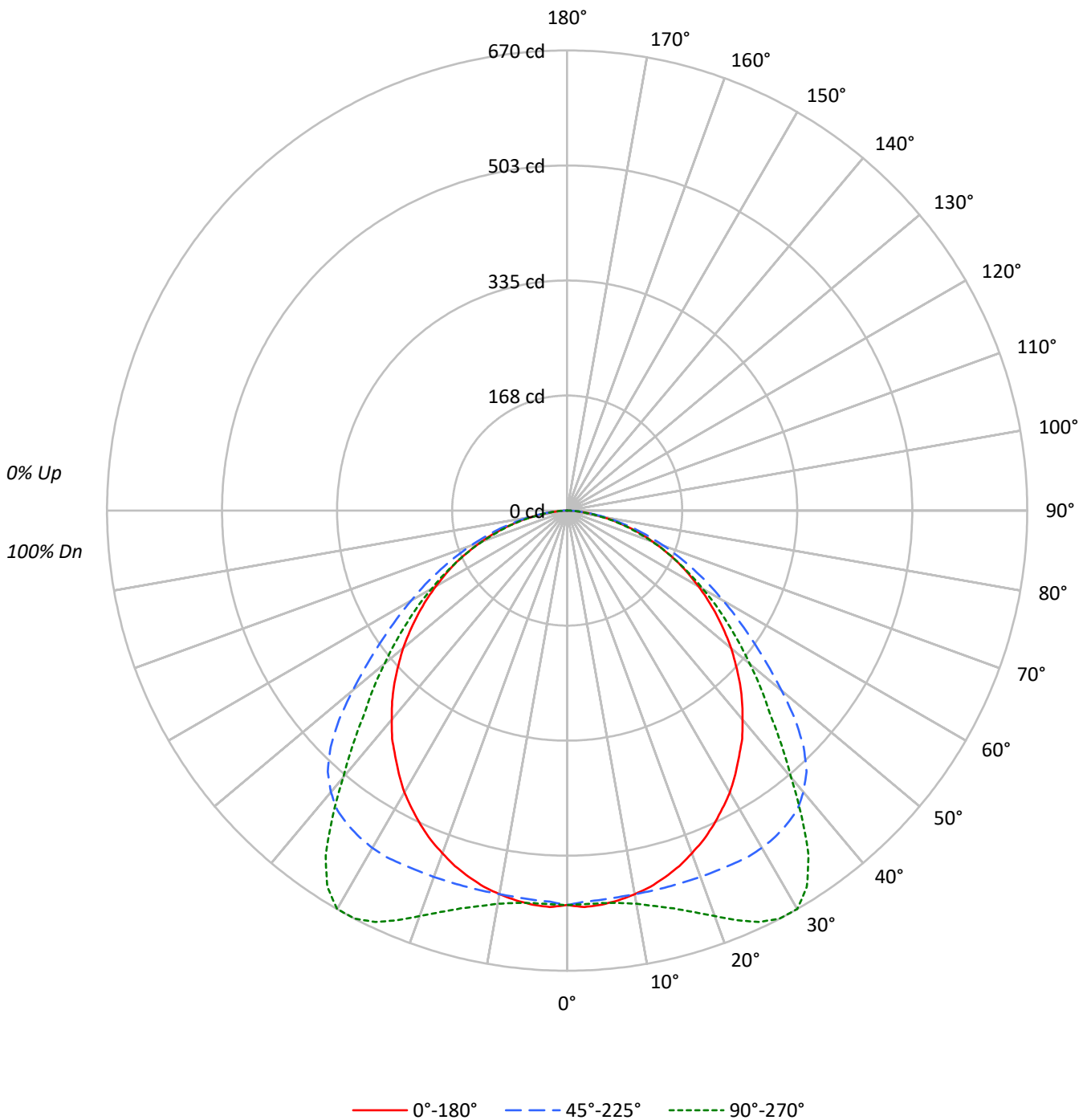
Lumens per Lamp: N/A
Luminaire Lumens: 1736.8 lumens
Efficiency: N/A
Efficacy: 90.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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: P1439829

CATALOG NUMBER: S123DR-S485D935-X4F0-XX-UDD-FLB-W

Luminous Intensity Polar Plot





TEST NUMBER: P1439829

CATALOG NUMBER: S123DR-S485D935-X4F0-XX-UDD-FLB-W

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	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	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85																												
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71																												
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60																												
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52																												
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45																												
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39																												
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34																												
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31																												
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	28																												
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6923	6923	6923
5°	6971	6885	6942
10°	6943	6943	7117
15°	6892	7078	7485
20°	6812	7284	8060
25°	6714	7560	8792
30°	6597	7895	9325
35°	6423	8207	9019
40°	6253	8420	7981
45°	6065	8302	7108
50°	5846	7641	6505
55°	5591	6915	5978
60°	5327	6330	5498
65°	5064	5794	5081
70°	4688	5252	4604
75°	4234	4677	4123
80°	3548	3916	3381
85°	2711	2877	2545

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 8302 cd/sqm

TEST NUMBER: P1439829

CATALOG NUMBER: S123DR-S485D935-X4F0-XX-UDD-FLB-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.7	3.1
10°-20°	162.5	9.4
20°-30°	266.3	15.3
30°-40°	336.8	19.4
40°-50°	329.1	18.9
50°-60°	270.3	15.6
60°-70°	190.7	11.0
70°-80°	101.6	5.9
80°-90°	24.8	1.4
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°	483.4	27.8
0°-40°	820.2	47.2
0°-60°	1419.7	81.7
0°-90°	1736.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1736.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	576	574	569	575	574	55
15°	552	555	567	593	600	156
25°	505	520	568	637	661	232
35°	436	467	558	622	613	273
45°	356	396	487	439	417	274
55°	266	306	329	296	284	238
65°	178	203	203	185	178	175
75°	91	102	100	91	88	96
85°	20	21	21	19	18	24
90°	0	0	0	0	0	



TEST NUMBER: P1439829

CATALOG NUMBER: S123DR-S485D935-X4F0-XX-UDD-FLB-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	574.2	574.2	574.2	574.2	574.2
2.5°	577.8	576.0	570.1	575.4	573.6
5°	576.0	573.6	568.9	574.8	573.6
7.5°	572.4	571.2	567.7	576.6	576.0
10°	567.1	566.5	567.1	580.2	581.3
12.5°	561.1	561.7	567.1	585.5	589.7
15°	552.2	555.2	567.1	592.6	599.7
17.5°	542.7	547.5	567.1	602.1	612.8
20°	530.9	539.2	567.7	612.2	628.2
22.5°	519.0	529.1	567.7	625.9	645.5
25°	504.7	519.6	568.3	637.2	660.9
27.5°	489.3	507.1	568.9	646.1	669.8
30°	473.9	495.2	567.1	649.6	669.8
32.5°	455.5	481.6	563.5	643.7	649.6
35°	436.4	466.7	557.6	622.3	612.8
37.5°	418.6	450.7	549.9	583.1	560.6
40°	397.3	433.5	535.0	533.2	507.1
42.5°	377.1	415.1	516.0	482.8	461.4
45°	355.7	396.1	486.9	439.4	416.9
47.5°	333.1	375.3	450.1	398.4	382.4
50°	311.7	353.9	407.4	361.0	346.8
52.5°	288.6	331.3	366.4	327.8	315.3
55°	266.0	305.8	329.0	295.7	284.4
57.5°	243.5	280.9	294.5	265.4	256.5
60°	220.9	254.7	262.5	237.5	228.0
62.5°	198.9	230.4	232.8	210.8	202.5
65°	177.5	203.1	203.1	185.3	178.1
67.5°	155.0	177.0	175.8	159.1	155.0
70°	133.0	151.4	149.0	135.4	130.6
72.5°	112.2	125.9	124.1	113.4	108.1
75°	90.9	102.1	100.4	90.9	88.5
77.5°	70.7	78.4	76.6	70.1	68.3
80°	51.1	57.0	56.4	51.7	48.7
82.5°	34.4	37.4	36.8	33.8	32.1
85°	19.6	21.4	20.8	19.0	18.4
87.5°	7.7	8.9	9.5	8.9	8.3
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1439829
 CATALOG NUMBER: S123DR-S485D935-X4F0-XX-UDD-FLB-W

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	18.36	19.97	18.73	20.28	20.59	18.09	19.69	18.45	20.01	20.32
	3H	19.93	21.38	20.31	21.70	22.06	19.60	21.05	19.98	21.37	21.74
	4H	20.48	21.84	20.88	22.19	22.57	20.14	21.50	20.54	21.85	22.22
	6H	20.85	22.11	21.26	22.47	22.86	20.50	21.75	20.91	22.12	22.51
	8H	20.95	22.15	21.37	22.54	22.94	20.59	21.79	21.01	22.18	22.58
	12H	21.00	22.15	21.43	22.53	22.96	20.64	21.79	21.07	22.17	22.60
4H	2H	19.00	20.36	19.40	20.71	21.08	18.79	20.15	19.18	20.49	20.87
	3H	20.81	21.94	21.22	22.34	22.74	20.50	21.64	20.91	22.03	22.43
	4H	21.50	22.52	21.93	22.93	23.37	21.14	22.16	21.57	22.58	23.01
	6H	21.98	22.87	22.43	23.31	23.77	21.60	22.49	22.05	22.93	23.39
	8H	22.11	22.94	22.57	23.39	23.85	21.73	22.56	22.19	23.00	23.47
	12H	22.19	22.94	22.68	23.42	23.89	21.81	22.55	22.29	23.03	23.50
8H	4H	21.76	22.59	22.22	23.04	23.50	21.45	22.28	21.91	22.72	23.19
	6H	22.35	23.04	22.85	23.53	24.01	22.01	22.70	22.50	23.19	23.66
	8H	22.54	23.17	23.06	23.67	24.16	22.19	22.81	22.70	23.32	23.80
	12H	22.69	23.23	23.19	23.73	24.29	22.32	22.87	22.82	23.36	23.92
12H	4H	21.78	22.52	22.26	23.00	23.47	21.47	22.22	21.95	22.70	23.17
	6H	22.38	23.01	22.89	23.51	24.00	22.05	22.67	22.56	23.18	23.67
	8H	22.63	23.18	23.13	23.67	24.23	22.28	22.83	22.79	23.32	23.88