

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: P1439982

Luminaire Tested: S124DR-S865D935-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439982
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DR-S865D935-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

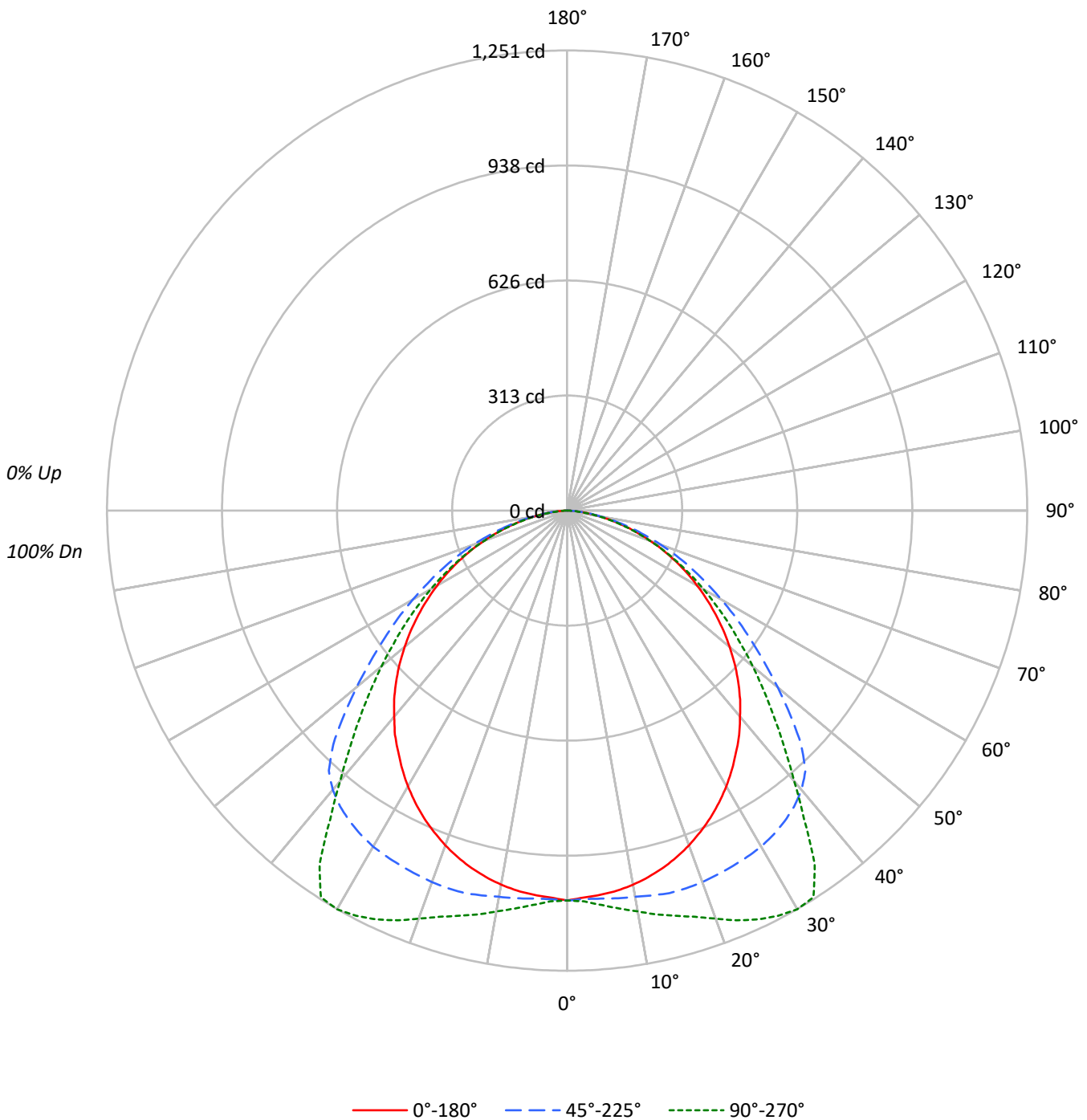
Lumens per Lamp: N/A
Luminaire Lumens: 3221.4 lumens
Efficiency: N/A
Efficacy: 92.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
Input Voltage (V): 120
Input Current (A_{in}): 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: P1439982

CATALOG NUMBER: S124DR-S865D935-X4F0-XX-UDD-FLB-W

Luminous Intensity Polar Plot





TEST NUMBER: P1439982

CATALOG NUMBER: S124DR-S865D935-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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	101	97	107	103	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	67	63	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	47	57	52	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	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°	9372	9372	9372
5°	9306	9398	9555
10°	9273	9572	9937
15°	9207	9854	10436
20°	9111	10111	11109
25°	8991	10401	11964
30°	8836	10769	12776
35°	8645	11127	12665
40°	8440	11441	11081
45°	8220	11251	9963
50°	7927	10273	9057
55°	7601	9349	8274
60°	7229	8571	7579
65°	6789	7812	6920
70°	6212	6993	6186
75°	5473	6005	5367
80°	4501	4822	4343
85°	3165	3266	2952

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 11251 cd/sqm



TEST NUMBER: P1439982

CATALOG NUMBER: S124DR-S865D935-X4F0-XX-UDD-FLB-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.7	3.2
10°-20°	304.8	9.5
20°-30°	496.1	15.4
30°-40°	630.0	19.6
40°-50°	613.9	19.1
50°-60°	503.4	15.6
60°-70°	351.2	10.9
70°-80°	180.2	5.6
80°-90°	40.0	1.2
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°	902.7	28.0
0°-40°	1532.7	47.6
0°-60°	2650.0	82.3
0°-90°	3221.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3221.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1060	1060	1060	1060	1060	
5°	1048	1064	1059	1066	1077	100
15°	1006	1037	1077	1119	1140	284
25°	922	981	1066	1176	1226	424
35°	801	879	1031	1181	1173	501
45°	657	739	900	825	797	507
55°	493	569	606	556	537	441
65°	324	371	373	343	331	321
75°	160	178	176	163	157	171
85°	31	32	32	30	29	39
90°	0	0	0	0	0	



TEST NUMBER: P1439982

CATALOG NUMBER: S124DR-S865D935-X4F0-XX-UDD-FLB-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1060.0	1060.0	1060.0	1060.0	1060.0
2.5°	1052.7	1066.2	1056.9	1061.0	1063.1
5°	1048.5	1064.1	1058.9	1066.2	1076.6
7.5°	1042.3	1060.0	1063.1	1077.7	1091.2
10°	1032.9	1053.7	1066.2	1091.2	1106.8
12.5°	1020.5	1046.5	1071.4	1105.8	1124.5
15°	1005.9	1037.1	1076.6	1119.3	1140.1
17.5°	988.2	1025.7	1076.6	1129.7	1157.8
20°	968.4	1012.1	1074.6	1143.2	1180.7
22.5°	945.6	997.6	1070.4	1158.8	1205.6
25°	921.6	980.9	1066.2	1176.5	1226.4
27.5°	894.6	961.2	1061.0	1190.0	1242.0
30°	865.5	937.2	1054.8	1196.3	1251.4
32.5°	834.3	909.2	1044.4	1196.3	1246.2
35°	801.0	879.0	1030.9	1180.7	1173.4
37.5°	768.7	846.7	1014.2	1104.7	1058.9
40°	731.3	812.4	991.3	997.6	960.1
42.5°	695.9	776.0	959.1	907.1	873.8
45°	657.4	738.6	899.8	824.9	796.8
47.5°	617.9	698.0	822.8	751.0	725.0
50°	576.3	657.4	746.9	681.3	658.5
52.5°	535.7	613.7	674.1	616.9	595.0
55°	493.1	569.0	606.5	555.5	536.8
57.5°	450.4	523.2	545.1	498.3	480.6
60°	408.8	474.3	484.7	444.2	428.6
62.5°	367.2	423.4	427.5	392.2	378.6
65°	324.5	371.4	373.4	343.3	330.8
67.5°	282.9	321.4	321.4	295.4	285.0
70°	240.3	272.5	270.5	249.7	239.3
72.5°	199.7	222.6	220.5	204.9	197.6
75°	160.2	177.9	175.8	163.3	157.1
77.5°	122.7	135.2	133.1	124.8	119.6
80°	88.4	95.7	94.7	88.4	85.3
82.5°	58.3	62.4	60.3	56.2	54.1
85°	31.2	32.2	32.2	30.2	29.1
87.5°	11.4	11.4	11.4	11.4	10.4
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1439982

CATALOG NUMBER: S124DR-S865D935-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	19.46	21.06	19.82	21.37	21.69	19.24	20.84	19.61	21.16	21.47
	3H	20.96	22.40	21.34	22.73	23.09	20.71	22.15	21.09	22.48	22.84
	4H	21.46	22.82	21.86	23.17	23.54	21.21	22.56	21.61	22.91	23.29
	6H	21.79	23.04	22.20	23.40	23.79	21.53	22.78	21.94	23.14	23.54
	8H	21.87	23.06	22.29	23.45	23.85	21.60	22.80	22.03	23.19	23.59
	12H	21.91	23.05	22.34	23.43	23.86	21.64	22.78	22.07	23.16	23.59
4H	2H	20.08	21.43	20.48	21.78	22.16	19.91	21.26	20.31	21.61	21.99
	3H	21.81	22.94	22.22	23.34	23.74	21.58	22.71	21.99	23.10	23.50
	4H	22.44	23.45	22.87	23.87	24.31	22.18	23.19	22.61	23.61	24.04
	6H	22.87	23.75	23.32	24.19	24.65	22.59	23.47	23.04	23.92	24.37
	8H	22.98	23.81	23.44	24.25	24.72	22.69	23.52	23.15	23.96	24.43
	12H	23.04	23.78	23.52	24.26	24.73	22.75	23.49	23.23	23.97	24.44
8H	4H	22.68	23.51	23.14	23.95	24.42	22.45	23.28	22.91	23.72	24.18
	6H	23.20	23.89	23.70	24.38	24.85	22.95	23.63	23.44	24.12	24.60
	8H	23.37	23.98	23.88	24.49	24.98	23.10	23.71	23.61	24.22	24.71
	12H	23.48	24.02	23.98	24.51	25.07	23.20	23.74	23.70	24.23	24.79
12H	4H	22.69	23.43	23.17	23.91	24.38	22.47	23.21	22.95	23.68	24.15
	6H	23.22	23.84	23.74	24.35	24.84	22.98	23.59	23.49	24.10	24.59
	8H	23.43	23.98	23.94	24.47	25.03	23.17	23.72	23.68	24.21	24.77