

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: P1439709

Luminaire Tested: S122DR-S865D850-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439709
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2602-702-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DR-S865D850-X4F0-XX-UDD-FLB-W
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

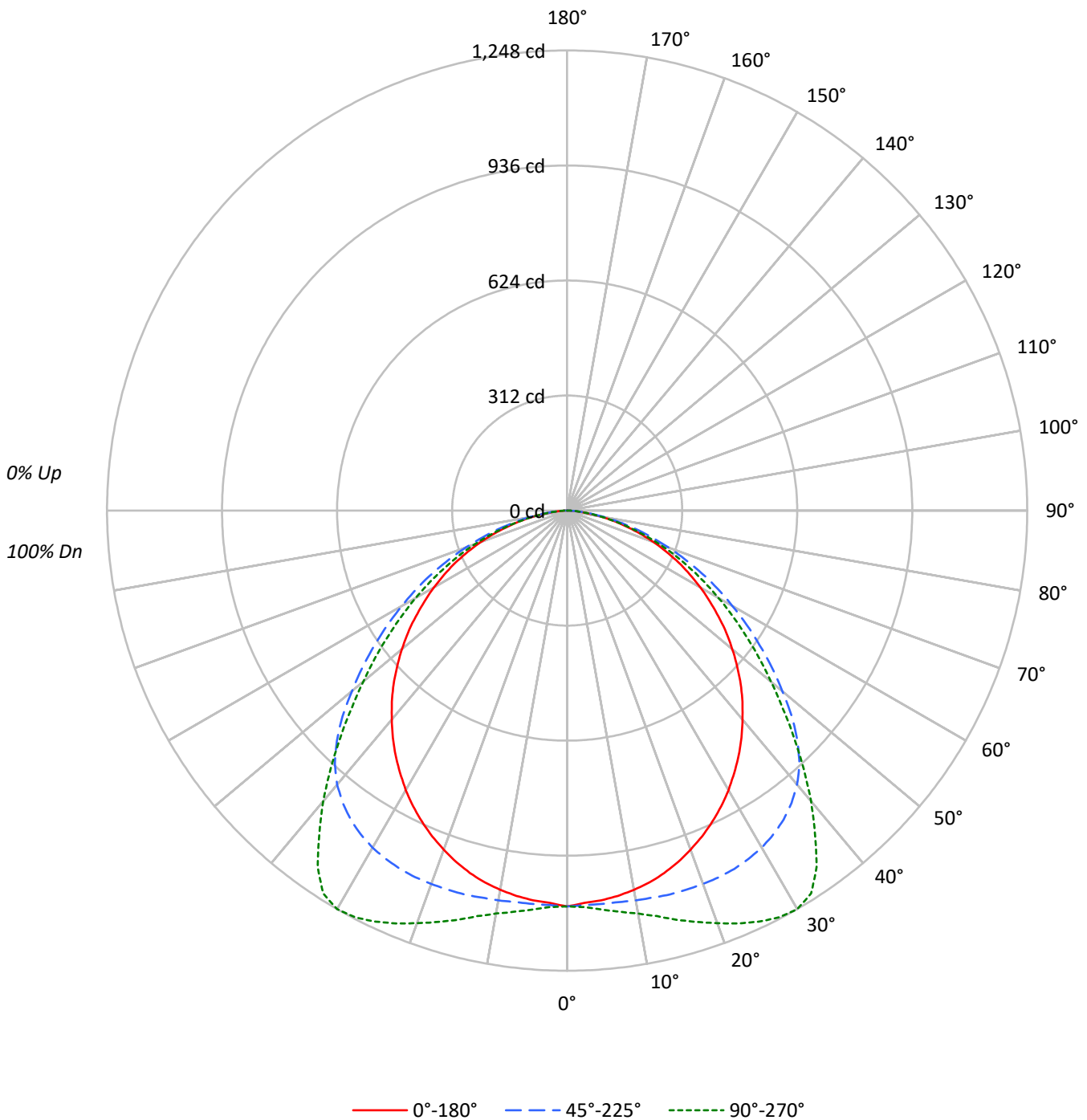
Lumens per Lamp: N/A
Luminaire Lumens: 3301.8 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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: P1439709

CATALOG NUMBER: S122DR-S865D850-X4F0-XX-UDD-FLB-W

Luminous Intensity Polar Plot





TEST NUMBER: P1439709

CATALOG NUMBER: S122DR-S865D850-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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85					85			
2	100	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71					71			
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60					60			
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51					51			
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44					44			
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39					39			
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34					34			
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30					30			
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27					27			
10	53	40	32	27	52	39	32	27	38	31	27	38	31	26	37	31	26	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20338	20338	20338
5°	20178	20365	20656
10°	20088	20652	21350
15°	19961	21138	22535
20°	19730	21728	24009
25°	19466	22414	25710
30°	19149	23089	27304
35°	18760	23668	27283
40°	18299	23995	25447
45°	17842	23677	23302
50°	17240	22465	21272
55°	16555	21074	19551
60°	15816	19624	17987
65°	14960	18089	16399
70°	13765	16164	14690
75°	12159	14003	12671
80°	10049	11118	10049
85°	6674	7282	6978

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 67.5°
 Vertical Angle: 45°
 Luminance: 23865 cd/sqm



TEST NUMBER: P1439709

CATALOG NUMBER: S122DR-S865D850-X4F0-XX-UDD-FLB-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.7	3.1
10°-20°	306.6	9.3
20°-30°	497.6	15.1
30°-40°	629.6	19.1
40°-50°	630.5	19.1
50°-60°	528.1	16.0
60°-70°	372.2	11.3
70°-80°	192.0	5.8
80°-90°	42.6	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°	906.9	27.5
0°-40°	1536.4	46.5
0°-60°	2695.1	81.6
0°-90°	3301.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3301.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1074	1074	1074	1074	1074	
5°	1061	1079	1071	1076	1086	101
15°	1018	1047	1078	1121	1149	287
25°	931	981	1072	1177	1230	429
35°	811	877	1023	1156	1180	507
45°	666	736	884	891	870	513
55°	501	563	638	612	592	449
65°	334	371	404	378	366	330
75°	166	183	191	177	173	177
85°	31	34	34	34	32	39
90°	0	0	0	0	0	



TEST NUMBER: P1439709

CATALOG NUMBER: S122DR-S865D850-X4F0-XX-UDD-FLB-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1073.5	1073.5	1073.5	1073.5	1073.5
2.5°	1065.2	1081.9	1070.8	1072.2	1076.3
5°	1061.0	1079.1	1070.8	1076.3	1086.1
7.5°	1054.0	1073.5	1070.8	1081.9	1097.3
10°	1044.2	1066.6	1073.5	1093.1	1109.8
12.5°	1033.1	1056.8	1074.9	1105.7	1126.6
15°	1017.7	1047.0	1077.7	1121.0	1148.9
17.5°	999.6	1034.5	1077.7	1137.8	1169.9
20°	978.6	1019.1	1077.7	1151.7	1190.8
22.5°	956.3	1001.0	1076.3	1164.3	1211.8
25°	931.2	981.4	1072.2	1176.9	1229.9
27.5°	904.6	959.1	1065.2	1186.6	1243.9
30°	875.3	933.9	1055.4	1190.8	1248.1
32.5°	843.2	907.4	1041.4	1182.4	1231.3
35°	811.1	876.7	1023.3	1155.9	1179.6
37.5°	776.2	844.6	999.6	1104.3	1104.3
40°	739.9	809.7	970.2	1033.1	1028.9
42.5°	703.6	773.4	932.5	963.3	949.3
45°	665.9	735.7	883.7	890.7	869.7
47.5°	625.4	693.8	826.5	816.7	792.9
50°	584.9	651.9	762.2	745.5	721.7
52.5°	544.5	608.7	700.8	677.1	656.1
55°	501.2	562.6	638.0	611.5	591.9
57.5°	459.3	516.5	578.0	548.6	531.9
60°	417.4	469.1	517.9	490.0	474.7
62.5°	375.5	420.2	460.7	432.8	418.8
65°	333.7	371.3	403.5	378.3	365.8
67.5°	290.4	323.9	346.2	323.9	315.5
70°	248.5	275.0	291.8	272.2	265.2
72.5°	206.6	228.9	240.1	224.8	217.8
75°	166.1	182.9	191.3	177.3	173.1
77.5°	127.0	139.6	143.8	134.0	128.4
80°	92.1	99.1	101.9	94.9	92.1
82.5°	57.2	62.8	65.6	60.0	58.6
85°	30.7	33.5	33.5	33.5	32.1
87.5°	11.2	14.0	14.0	14.0	12.6
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1439709
 CATALOG NUMBER: S122DR-S865D850-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	21.95	23.56	22.32	23.88	24.19	22.46	24.08	22.83	24.39	24.71
	3H	23.52	24.98	23.90	25.30	25.66	23.93	25.39	24.31	25.71	26.07
	4H	24.06	25.42	24.46	25.77	26.15	24.43	25.79	24.82	26.14	26.52
	6H	24.40	25.67	24.81	26.03	26.42	24.73	25.99	25.14	26.35	26.75
	8H	24.48	25.69	24.91	26.08	26.48	24.80	26.01	25.22	26.39	26.79
	12H	24.52	25.68	24.95	26.06	26.49	24.83	25.99	25.26	26.37	26.80
4H	2H	22.71	24.07	23.10	24.42	24.80	23.10	24.47	23.50	24.82	25.19
	3H	24.48	25.62	24.89	26.01	26.41	24.77	25.91	25.18	26.31	26.71
	4H	25.12	26.15	25.56	26.57	27.00	25.36	26.39	25.80	26.81	27.24
	6H	25.57	26.46	26.02	26.90	27.36	25.76	26.66	26.22	27.10	27.55
	8H	25.68	26.51	26.14	26.96	27.42	25.86	26.70	26.32	27.14	27.61
	12H	25.74	26.49	26.22	26.96	27.43	25.92	26.67	26.40	27.15	27.62
8H	4H	25.41	26.24	25.87	26.69	27.15	25.62	26.46	26.08	26.90	27.37
	6H	25.95	26.64	26.44	27.13	27.60	26.11	26.80	26.60	27.29	27.76
	8H	26.10	26.73	26.61	27.23	27.72	26.25	26.87	26.76	27.38	27.87
	12H	26.21	26.76	26.72	27.25	27.81	26.35	26.90	26.86	27.39	27.95
12H	4H	25.42	26.17	25.90	26.65	27.12	25.64	26.39	26.12	26.86	27.33
	6H	25.97	26.60	26.48	27.11	27.59	26.13	26.76	26.64	27.26	27.75
	8H	26.18	26.73	26.69	27.22	27.78	26.32	26.87	26.83	27.36	27.92