

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: P1439984

Luminaire Tested: S124DR-S865D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439984
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-S865D950-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

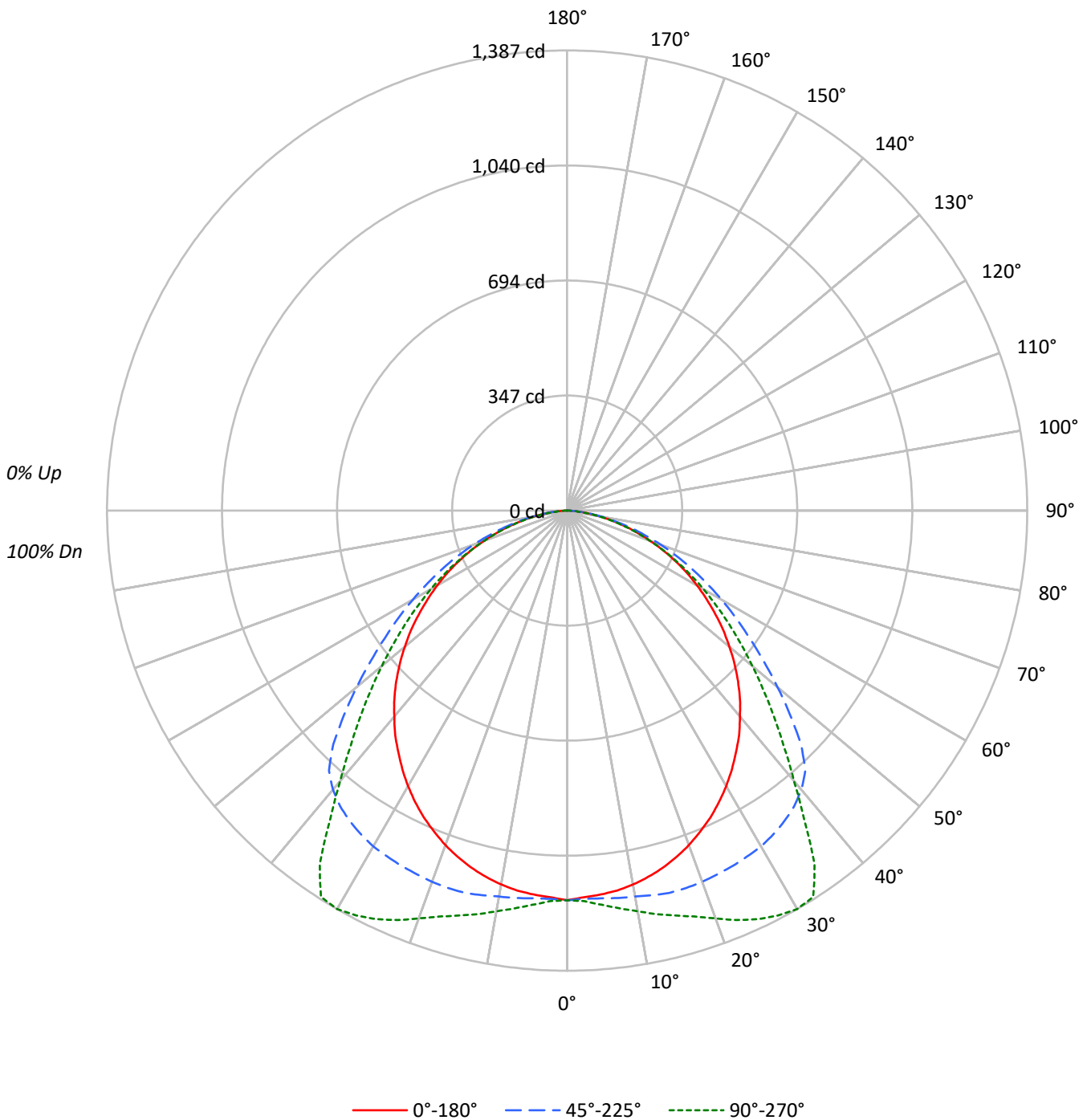
Lumens per Lamp: N/A
Luminaire Lumens: 3569.4 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
Input Voltage (V): 120
Input Current (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

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Luminous Intensity Polar Plot





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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	66	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°	10384	10384	10384
5°	10311	10413	10587
10°	10275	10606	11010
15°	10202	10919	11562
20°	10097	11202	12309
25°	9962	11525	13257
30°	9791	11931	14156
35°	9579	12328	14032
40°	9352	12677	12278
45°	9108	12466	11039
50°	8782	11383	10035
55°	8421	10359	9167
60°	8010	9497	8398
65°	7523	8657	7667
70°	6881	7747	6853
75°	6063	6654	5944
80°	4990	5341	4812
85°	3510	3622	3277

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 12466 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.7	3.2
10°-20°	337.7	9.5
20°-30°	549.7	15.4
30°-40°	698.1	19.6
40°-50°	680.2	19.1
50°-60°	557.7	15.6
60°-70°	389.1	10.9
70°-80°	199.7	5.6
80°-90°	44.3	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°	1000.2	28.0
0°-40°	1698.3	47.6
0°-60°	2936.2	82.3
0°-90°	3569.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3569.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1174	1174	1174	1174	1174	
5°	1162	1179	1173	1181	1193	110
15°	1115	1149	1193	1240	1263	314
25°	1021	1087	1181	1304	1359	470
35°	888	974	1142	1308	1300	555
45°	728	818	997	914	883	561
55°	546	630	672	616	595	488
65°	360	412	414	380	366	356
75°	178	197	195	181	174	189
85°	35	36	36	33	32	44
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1174.5	1174.5	1174.5	1174.5	1174.5
2.5°	1166.4	1181.4	1171.0	1175.6	1177.9
5°	1161.8	1179.1	1173.3	1181.4	1192.9
7.5°	1154.9	1174.5	1177.9	1194.1	1209.1
10°	1144.5	1167.6	1181.4	1209.1	1226.4
12.5°	1130.7	1159.5	1187.2	1225.2	1245.9
15°	1114.6	1149.1	1192.9	1240.2	1263.2
17.5°	1095.0	1136.4	1192.9	1251.7	1282.8
20°	1073.1	1121.5	1190.6	1266.7	1308.2
22.5°	1047.7	1105.3	1186.0	1284.0	1335.8
25°	1021.2	1086.9	1181.4	1303.6	1358.9
27.5°	991.2	1065.0	1175.6	1318.6	1376.2
30°	959.0	1038.5	1168.7	1325.5	1386.6
32.5°	924.4	1007.4	1157.2	1325.5	1380.8
35°	887.5	973.9	1142.2	1308.2	1300.1
37.5°	851.8	938.2	1123.8	1224.0	1173.3
40°	810.3	900.2	1098.4	1105.3	1063.8
42.5°	771.1	859.8	1062.7	1005.1	968.2
45°	728.4	818.3	997.0	914.0	882.9
47.5°	684.6	773.4	911.7	832.2	803.4
50°	638.5	728.4	827.6	754.9	729.6
52.5°	593.6	680.0	746.9	683.5	659.3
55°	546.3	630.5	672.0	615.5	594.7
57.5°	499.1	579.8	604.0	552.1	532.5
60°	453.0	525.6	537.1	492.2	474.9
62.5°	406.9	469.1	473.7	434.5	419.5
65°	359.6	411.5	413.8	380.4	366.5
67.5°	313.5	356.1	356.1	327.3	315.8
70°	266.2	302.0	299.7	276.6	265.1
72.5°	221.3	246.7	244.3	227.1	219.0
75°	177.5	197.1	194.8	181.0	174.0
77.5°	136.0	149.8	147.5	138.3	132.5
80°	98.0	106.0	104.9	98.0	94.5
82.5°	64.5	69.2	66.8	62.2	59.9
85°	34.6	35.7	35.7	33.4	32.3
87.5°	12.7	12.7	12.7	12.7	11.5
90°	0.0	0.0	0.0	0.0	0.0



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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	19.82	21.41	20.18	21.73	22.04	19.60	21.20	19.96	21.51	21.83
	3H	21.32	22.76	21.70	23.09	23.45	21.07	22.51	21.45	22.84	23.20
	4H	21.82	23.17	22.22	23.52	23.90	21.57	22.92	21.97	23.27	23.64
	6H	22.14	23.39	22.55	23.76	24.15	21.88	23.14	22.29	23.50	23.89
	8H	22.22	23.42	22.65	23.81	24.21	21.96	23.15	22.38	23.54	23.94
	12H	22.26	23.41	22.69	23.79	24.22	21.99	23.14	22.42	23.52	23.95
4H	2H	20.44	21.79	20.84	22.14	22.52	20.27	21.62	20.67	21.97	22.35
	3H	22.17	23.29	22.58	23.69	24.09	21.93	23.06	22.34	23.46	23.86
	4H	22.80	23.81	23.23	24.23	24.66	22.53	23.55	22.96	23.96	24.40
	6H	23.22	24.11	23.68	24.55	25.01	22.95	23.83	23.40	24.27	24.73
	8H	23.34	24.16	23.80	24.61	25.07	23.05	23.88	23.51	24.32	24.78
	12H	23.40	24.14	23.88	24.62	25.09	23.11	23.85	23.59	24.32	24.79
8H	4H	23.04	23.86	23.50	24.31	24.77	22.80	23.63	23.27	24.08	24.54
	6H	23.56	24.25	24.05	24.74	25.21	23.30	23.99	23.80	24.48	24.96
	8H	23.72	24.34	24.24	24.85	25.33	23.45	24.07	23.96	24.58	25.06
	12H	23.83	24.38	24.34	24.87	25.43	23.55	24.10	24.06	24.59	25.15
12H	4H	23.05	23.79	23.53	24.27	24.74	22.82	23.56	23.30	24.04	24.51
	6H	23.58	24.20	24.09	24.71	25.19	23.33	23.95	23.85	24.46	24.95
	8H	23.79	24.34	24.30	24.83	25.39	23.53	24.07	24.04	24.56	25.12