

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: P1439899

Luminaire Tested: S124DR-H1005D927-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439899
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-H1005D927-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

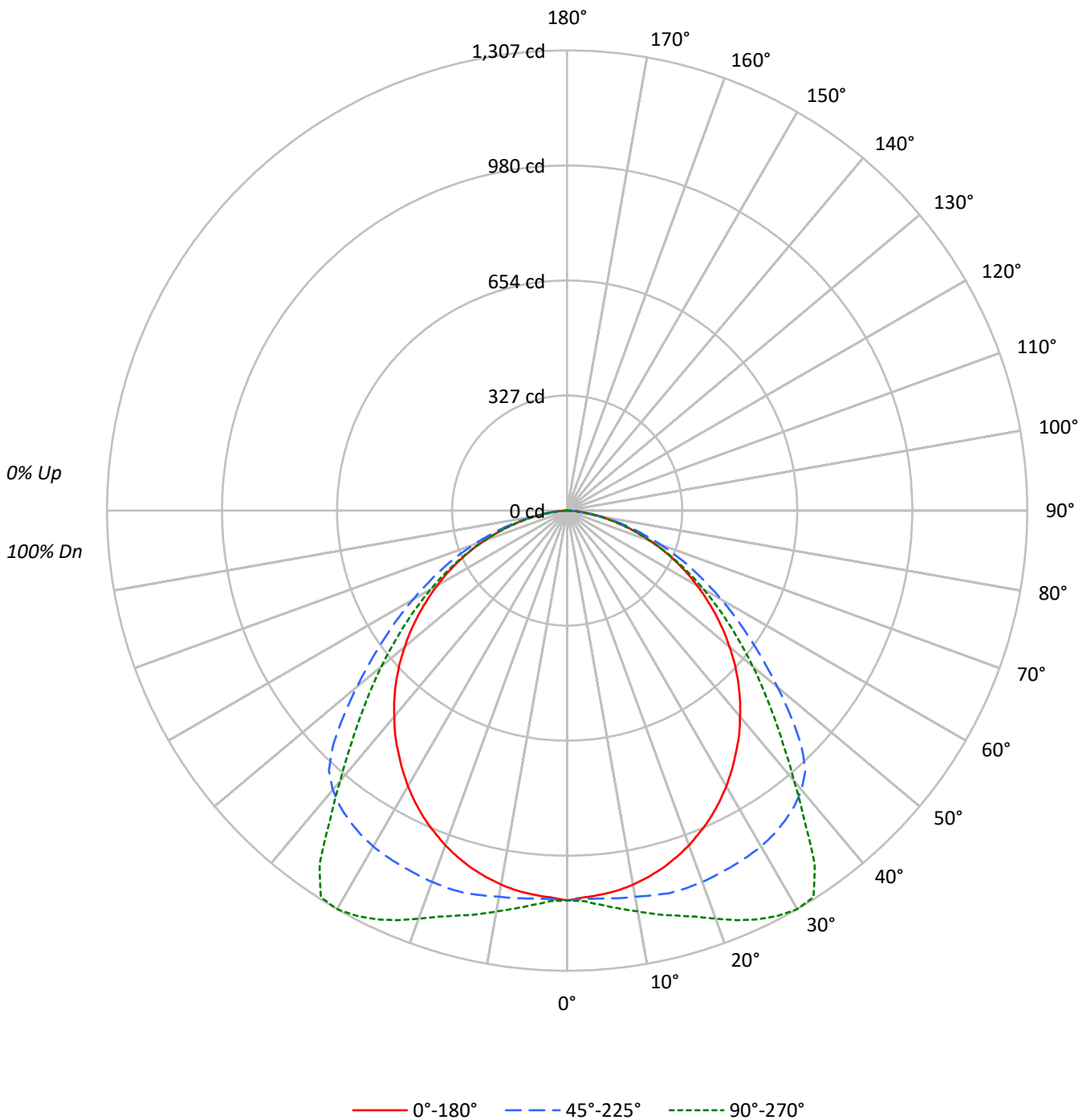
Lumens per Lamp: N/A
Luminaire Lumens: 3364.9 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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: P1439899

CATALOG NUMBER: S124DR-H1005D927-X4F0-XX-UDD-FLB-W

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°	9789	9789	9789
5°	9720	9817	9981
10°	9686	9999	10379
15°	9617	10294	10900
20°	9518	10560	11603
25°	9392	10865	12497
30°	9229	11247	13344
35°	9030	11622	13228
40°	8815	11951	11575
45°	8586	11752	10407
50°	8279	10730	9461
55°	7938	9765	8643
60°	7551	8953	7917
65°	7092	8161	7228
70°	6488	7303	6460
75°	5715	6272	5606
80°	4705	5036	4537
85°	3307	3419	3084

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 11752 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	106.2	3.2
10°-20°	318.4	9.5
20°-30°	518.2	15.4
30°-40°	658.1	19.6
40°-50°	641.3	19.1
50°-60°	525.8	15.6
60°-70°	366.8	10.9
70°-80°	188.3	5.6
80°-90°	41.8	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°	942.8	28.0
0°-40°	1600.9	47.6
0°-60°	2768.0	82.3
0°-90°	3364.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3364.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1107	1107	1107	1107	1107	
5°	1095	1112	1106	1114	1125	104
15°	1051	1083	1125	1169	1191	296
25°	963	1025	1114	1229	1281	443
35°	837	918	1077	1233	1226	524
45°	687	771	940	862	832	529
55°	515	594	634	580	561	460
65°	339	388	390	359	346	336
75°	167	186	184	171	164	178
85°	33	34	34	32	30	41
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1107.2	1107.2	1107.2	1107.2	1107.2
2.5°	1099.6	1113.7	1103.9	1108.3	1110.4
5°	1095.2	1111.5	1106.1	1113.7	1124.6
7.5°	1088.7	1107.2	1110.4	1125.7	1139.8
10°	1078.9	1100.7	1113.7	1139.8	1156.1
12.5°	1065.9	1093.1	1119.1	1155.0	1174.5
15°	1050.7	1083.3	1124.6	1169.1	1190.8
17.5°	1032.2	1071.3	1124.6	1180.0	1209.3
20°	1011.6	1057.2	1122.4	1194.1	1233.2
22.5°	987.7	1042.0	1118.0	1210.4	1259.3
25°	962.7	1024.6	1113.7	1228.9	1281.0
27.5°	934.4	1004.0	1108.3	1243.0	1297.3
30°	904.0	979.0	1101.7	1249.5	1307.1
32.5°	871.4	949.6	1090.9	1249.5	1301.7
35°	836.6	918.1	1076.8	1233.2	1225.6
37.5°	803.0	884.4	1059.4	1153.9	1106.1
40°	763.8	848.6	1035.5	1042.0	1002.9
42.5°	726.9	810.6	1001.8	947.5	912.7
45°	686.7	771.4	939.9	861.6	832.3
47.5°	645.4	729.1	859.5	784.5	757.3
50°	601.9	686.7	780.1	711.7	687.8
52.5°	559.6	641.1	704.1	644.3	621.5
55°	515.0	594.3	633.5	580.2	560.7
57.5°	470.5	546.5	569.3	520.5	502.0
60°	427.0	495.5	506.3	464.0	447.7
62.5°	383.5	442.2	446.6	409.6	395.5
65°	339.0	387.9	390.1	358.6	345.5
67.5°	295.5	335.7	335.7	308.6	297.7
70°	251.0	284.7	282.5	260.8	249.9
72.5°	208.6	232.5	230.3	214.0	206.4
75°	167.3	185.8	183.6	170.6	164.1
77.5°	128.2	141.2	139.1	130.4	125.0
80°	92.4	100.0	98.9	92.4	89.1
82.5°	60.8	65.2	63.0	58.7	56.5
85°	32.6	33.7	33.7	31.5	30.4
87.5°	12.0	12.0	12.0	12.0	10.9
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	19.61	21.21	19.97	21.52	21.84	19.40	20.99	19.76	21.31	21.62
	3H	21.11	22.55	21.49	22.88	23.24	20.87	22.31	21.24	22.63	22.99
	4H	21.62	22.97	22.01	23.32	23.69	21.36	22.72	21.76	23.06	23.44
	6H	21.94	23.19	22.35	23.55	23.95	21.68	22.93	22.09	23.30	23.69
	8H	22.02	23.21	22.44	23.60	24.00	21.75	22.95	22.18	23.34	23.74
	12H	22.06	23.20	22.49	23.58	24.01	21.79	22.93	22.22	23.31	23.74
4H	2H	20.23	21.59	20.63	21.93	22.31	20.06	21.42	20.46	21.76	22.14
	3H	21.96	23.09	22.37	23.49	23.89	21.73	22.86	22.14	23.26	23.66
	4H	22.59	23.61	23.02	24.02	24.46	22.33	23.34	22.76	23.76	24.19
	6H	23.02	23.90	23.47	24.34	24.80	22.74	23.63	23.20	24.07	24.52
	8H	23.13	23.96	23.59	24.40	24.87	22.84	23.67	23.31	24.11	24.58
	12H	23.19	23.94	23.68	24.41	24.88	22.90	23.64	23.38	24.12	24.59
8H	4H	22.83	23.66	23.29	24.10	24.57	22.60	23.43	23.06	23.87	24.34
	6H	23.35	24.04	23.85	24.53	25.01	23.10	23.79	23.60	24.28	24.75
	8H	23.52	24.13	24.03	24.64	25.13	23.25	23.86	23.76	24.37	24.86
	12H	23.63	24.17	24.14	24.66	25.23	23.35	23.89	23.86	24.38	24.94
12H	4H	22.84	23.58	23.32	24.06	24.53	22.62	23.36	23.10	23.84	24.31
	6H	23.38	23.99	23.89	24.50	24.99	23.13	23.75	23.64	24.25	24.74
	8H	23.59	24.13	24.09	24.62	25.18	23.32	23.87	23.83	24.36	24.92