

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: P1439936

Luminaire Tested: S124DR-H865D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439936
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-H865D930-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

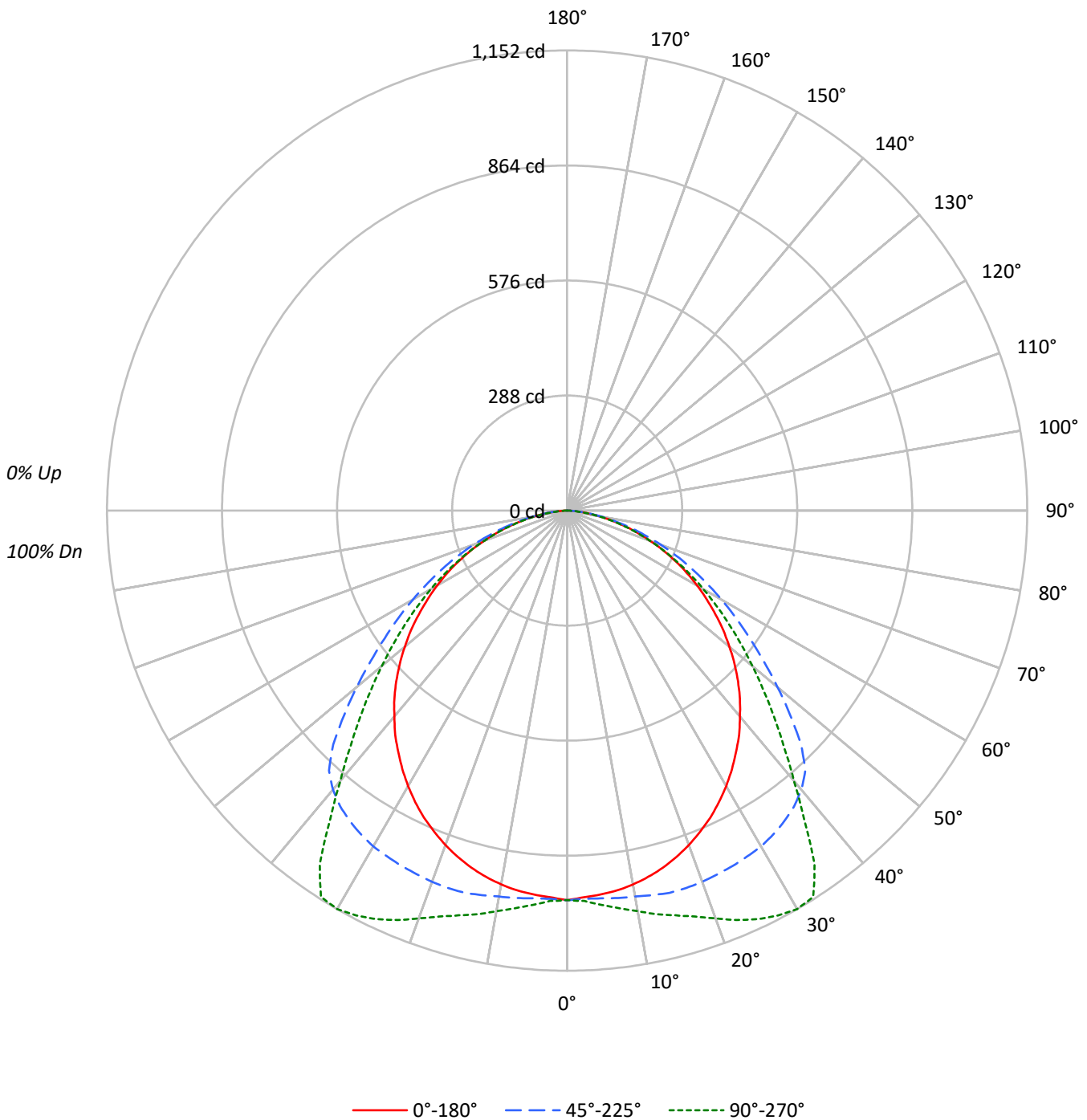
Lumens per Lamp: N/A
Luminaire Lumens: 2964.4 lumens
Efficiency: N/A
Efficacy: 95.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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	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°	8624	8624	8624
5°	8564	8649	8793
10°	8533	8809	9144
15°	8473	9069	9603
20°	8385	9303	10223
25°	8274	9572	11010
30°	8131	9910	11757
35°	7956	10239	11655
40°	7766	10529	10197
45°	7565	10353	9169
50°	7294	9454	8334
55°	6994	8603	7613
60°	6652	7888	6974
65°	6249	7190	6368
70°	5716	6434	5692
75°	5035	5527	4936
80°	4145	4435	3997
85°	2911	3013	2719

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10353 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	93.6	3.2
10°-20°	280.5	9.5
20°-30°	456.6	15.4
30°-40°	579.8	19.6
40°-50°	565.0	19.1
50°-60°	463.2	15.6
60°-70°	323.2	10.9
70°-80°	165.9	5.6
80°-90°	36.8	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°	830.7	28.0
0°-40°	1410.4	47.6
0°-60°	2438.6	82.3
0°-90°	2964.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2964.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	975	975	975	975	975	
5°	965	979	974	981	991	92
15°	926	954	991	1030	1049	261
25°	848	903	981	1083	1129	390
35°	737	809	949	1086	1080	461
45°	605	680	828	759	733	466
55°	454	524	558	511	494	406
65°	299	342	344	316	304	296
75°	147	164	162	150	144	157
85°	29	30	30	28	27	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	975.4	975.4	975.4	975.4	975.4
2.5°	968.7	981.2	972.6	976.4	978.3
5°	964.9	979.3	974.5	981.2	990.8
7.5°	959.2	975.4	978.3	991.7	1004.2
10°	950.5	969.7	981.2	1004.2	1018.5
12.5°	939.1	963.0	986.0	1017.6	1034.8
15°	925.7	954.4	990.8	1030.0	1049.1
17.5°	909.4	943.8	990.8	1039.6	1065.4
20°	891.2	931.4	988.8	1052.0	1086.5
22.5°	870.1	918.0	985.0	1066.4	1109.5
25°	848.1	902.7	981.2	1082.6	1128.6
27.5°	823.2	884.5	976.4	1095.1	1143.0
30°	796.4	862.5	970.7	1100.8	1151.6
32.5°	767.7	836.6	961.1	1100.8	1146.8
35°	737.1	808.9	948.6	1086.5	1079.8
37.5°	707.4	779.2	933.3	1016.6	974.5
40°	672.9	747.6	912.3	918.0	883.5
42.5°	640.4	714.1	882.6	834.7	804.1
45°	605.0	679.6	828.0	759.1	733.3
47.5°	568.6	642.3	757.2	691.1	667.2
50°	530.3	605.0	687.3	627.0	605.9
52.5°	493.0	564.8	620.3	567.6	547.5
55°	453.7	523.6	558.1	511.2	493.9
57.5°	414.5	481.5	501.6	458.5	442.2
60°	376.2	436.5	446.1	408.7	394.4
62.5°	337.9	389.6	393.4	360.9	348.4
65°	298.7	341.7	343.7	315.9	304.4
67.5°	260.4	295.8	295.8	271.9	262.3
70°	221.1	250.8	248.9	229.7	220.2
72.5°	183.8	204.9	202.9	188.6	181.9
75°	147.4	163.7	161.8	150.3	144.5
77.5°	113.0	124.4	122.5	114.9	110.1
80°	81.4	88.1	87.1	81.4	78.5
82.5°	53.6	57.4	55.5	51.7	49.8
85°	28.7	29.7	29.7	27.8	26.8
87.5°	10.5	10.5	10.5	10.5	9.6
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	19.17	20.77	19.53	21.08	21.40	18.95	20.55	19.32	20.87	21.18
	3H	20.67	22.11	21.05	22.44	22.80	20.43	21.87	20.80	22.19	22.55
	4H	21.18	22.53	21.57	22.88	23.25	20.92	22.27	21.32	22.62	23.00
	6H	21.50	22.75	21.91	23.11	23.51	21.24	22.49	21.65	22.85	23.25
	8H	21.58	22.77	22.00	23.16	23.56	21.31	22.51	21.74	22.90	23.30
	12H	21.62	22.76	22.05	23.14	23.57	21.35	22.49	21.78	22.87	23.30
4H	2H	19.79	21.15	20.19	21.49	21.87	19.62	20.98	20.02	21.32	21.70
	3H	21.52	22.65	21.93	23.05	23.45	21.29	22.42	21.70	22.82	23.22
	4H	22.15	23.17	22.58	23.58	24.02	21.89	22.90	22.32	23.32	23.75
	6H	22.58	23.46	23.03	23.90	24.36	22.30	23.19	22.76	23.63	24.08
	8H	22.69	23.52	23.15	23.96	24.43	22.40	23.23	22.86	23.67	24.14
	12H	22.75	23.50	23.24	23.97	24.44	22.46	23.20	22.94	23.68	24.15
8H	4H	22.39	23.22	22.85	23.66	24.13	22.16	22.99	22.62	23.43	23.90
	6H	22.92	23.60	23.41	24.09	24.57	22.66	23.35	23.15	23.83	24.31
	8H	23.08	23.70	23.59	24.20	24.69	22.81	23.42	23.32	23.93	24.42
	12H	23.19	23.73	23.70	24.22	24.79	22.91	23.45	23.42	23.94	24.50
12H	4H	22.40	23.14	22.88	23.62	24.09	22.18	22.92	22.66	23.40	23.87
	6H	22.94	23.55	23.45	24.06	24.55	22.69	23.31	23.20	23.81	24.30
	8H	23.15	23.69	23.65	24.18	24.74	22.88	23.43	23.39	23.92	24.48