

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: P1439930

Luminaire Tested: S124DR-H675D950-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439930
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-H675D950-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

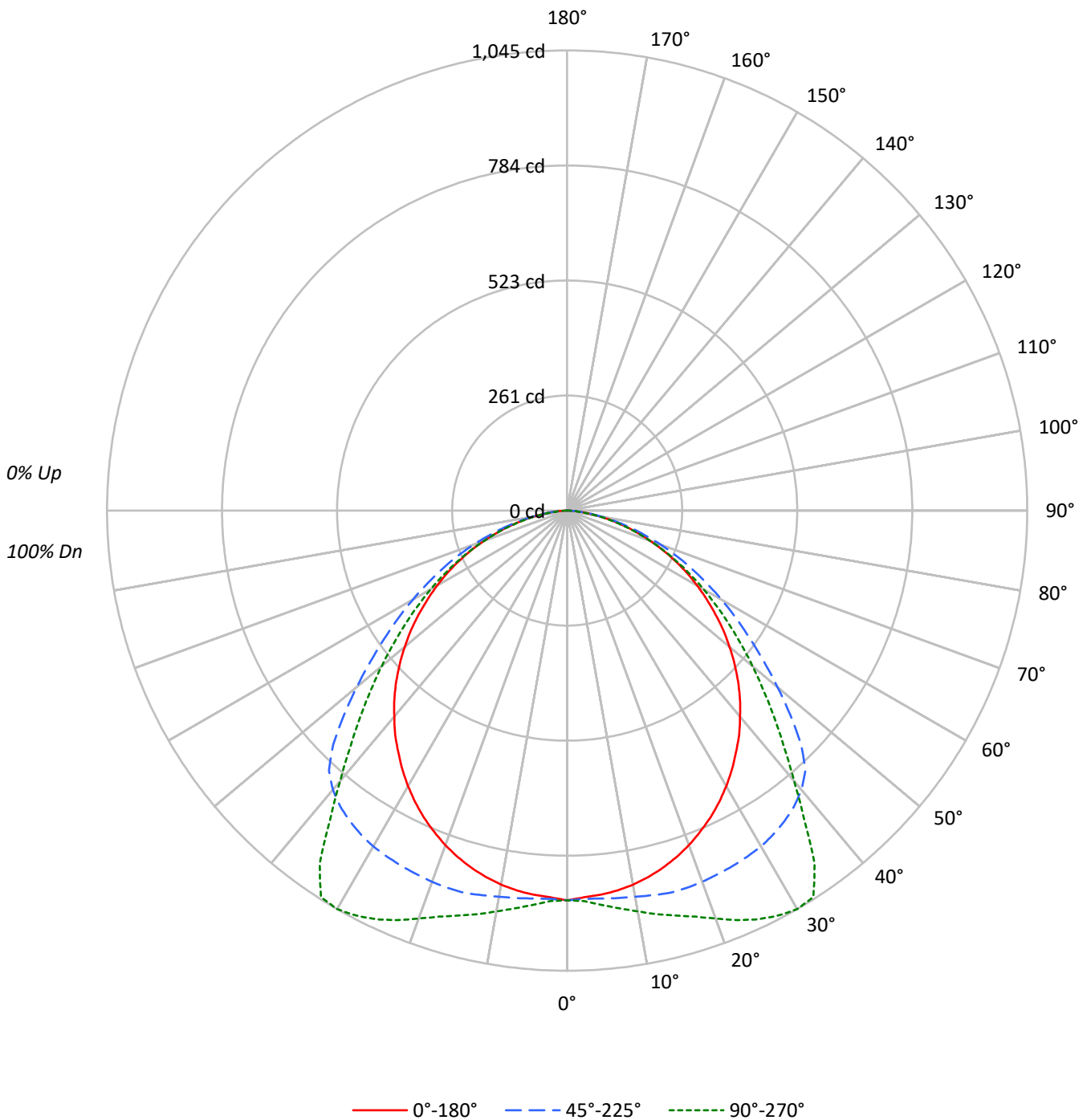
Lumens per Lamp: N/A
Luminaire Lumens: 2689.7 lumens
Efficiency: N/A
Efficacy: 113.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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													100															
1	109	105	101	97	107	103	99	95	98	95	92	94	92	90	91	89	87	85													85															
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71													71															
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	66	63	60													60															
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52													52															
5	77	64	55	49	75	63	55	49	61	54	48	59	53	47	57	52	47	45													45															
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39													39															
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35													35															
8	61	48	39	34	60	47	39	33	46	38	33	44	38	33	43	37	33	31													31															
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28													28															
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25													25															

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7825	7825	7825
5°	7770	7847	7978
10°	7743	7993	8296
15°	7688	8228	8713
20°	7608	8442	9275
25°	7507	8685	9990
30°	7377	8991	10668
35°	7219	9290	10574
40°	7047	9553	9253
45°	6863	9394	8319
50°	6619	8577	7562
55°	6346	7806	6909
60°	6035	7156	6327
65°	5669	6523	5778
70°	5186	5837	5165
75°	4571	5015	4478
80°	3758	4022	3625
85°	2648	2729	2465

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9394 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.9	3.2
10°-20°	254.5	9.5
20°-30°	414.2	15.4
30°-40°	526.1	19.6
40°-50°	512.6	19.1
50°-60°	420.3	15.6
60°-70°	293.2	10.9
70°-80°	150.5	5.6
80°-90°	33.4	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°	753.7	28.0
0°-40°	1279.7	47.6
0°-60°	2212.6	82.3
0°-90°	2689.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2689.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	885	885	885	885	885	
5°	876	888	884	890	899	83
15°	840	866	899	934	952	237
25°	770	819	890	982	1024	354
35°	669	734	861	986	980	419
45°	549	617	751	689	665	423
55°	412	475	506	464	448	368
65°	271	310	312	287	276	268
75°	134	148	147	136	131	142
85°	26	27	27	25	24	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	885.0	885.0	885.0	885.0	885.0
2.5°	879.0	890.3	882.4	885.9	887.6
5°	875.5	888.5	884.2	890.3	898.9
7.5°	870.3	885.0	887.6	899.8	911.1
10°	862.5	879.8	890.3	911.1	924.1
12.5°	852.0	873.8	894.6	923.3	938.9
15°	839.9	865.9	898.9	934.5	951.9
17.5°	825.1	856.4	898.9	943.2	966.7
20°	808.6	845.1	897.2	954.5	985.8
22.5°	789.5	832.9	893.7	967.6	1006.6
25°	769.5	819.0	890.3	982.3	1024.0
27.5°	746.9	802.5	885.9	993.6	1037.0
30°	722.6	782.6	880.7	998.8	1044.9
32.5°	696.6	759.1	872.0	998.8	1040.5
35°	668.8	733.9	860.7	985.8	979.7
37.5°	641.9	707.0	846.8	922.4	884.2
40°	610.6	678.3	827.7	832.9	801.7
42.5°	581.1	647.9	800.8	757.4	729.6
45°	548.9	616.7	751.3	688.8	665.3
47.5°	515.9	582.8	687.0	627.1	605.4
50°	481.2	548.9	623.6	568.9	549.8
52.5°	447.3	512.4	562.8	515.0	496.8
55°	411.7	475.1	506.4	463.8	448.2
57.5°	376.1	436.9	455.1	416.0	401.3
60°	341.3	396.1	404.7	370.9	357.8
62.5°	306.6	353.5	357.0	327.4	316.1
65°	271.0	310.1	311.8	286.6	276.2
67.5°	236.2	268.4	268.4	246.7	238.0
70°	200.6	227.6	225.8	208.4	199.8
72.5°	166.8	185.9	184.1	171.1	165.0
75°	133.8	148.5	146.8	136.4	131.1
77.5°	102.5	112.9	111.2	104.2	99.9
80°	73.8	79.9	79.0	73.8	71.2
82.5°	48.6	52.1	50.4	46.9	45.2
85°	26.1	26.9	26.9	25.2	24.3
87.5°	9.6	9.6	9.6	9.6	8.7
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	18.83	20.43	19.20	20.75	21.06	18.62	20.22	18.98	20.53	20.84
	3H	20.34	21.78	20.71	22.10	22.46	20.09	21.53	20.46	21.85	22.21
	4H	20.84	22.19	21.24	22.54	22.92	20.58	21.94	20.98	22.28	22.66
	6H	21.16	22.41	21.57	22.78	23.17	20.90	22.15	21.31	22.52	22.91
	8H	21.24	22.44	21.67	22.83	23.22	20.98	22.17	21.40	22.56	22.96
	12H	21.28	22.42	21.71	22.81	23.24	21.01	22.15	21.44	22.54	22.96
4H	2H	19.45	20.81	19.85	21.16	21.53	19.28	20.64	19.68	20.99	21.36
	3H	21.18	22.31	21.59	22.71	23.11	20.95	22.08	21.36	22.48	22.88
	4H	21.81	22.83	22.24	23.24	23.68	21.55	22.57	21.98	22.98	23.42
	6H	22.24	23.12	22.69	23.57	24.02	21.96	22.85	22.42	23.29	23.75
	8H	22.35	23.18	22.81	23.62	24.09	22.06	22.89	22.53	23.34	23.80
	12H	22.42	23.16	22.90	23.64	24.10	22.12	22.87	22.60	23.34	23.81
8H	4H	22.05	22.88	22.52	23.32	23.79	21.82	22.65	22.28	23.09	23.56
	6H	22.58	23.26	23.07	23.75	24.23	22.32	23.01	22.82	23.50	23.97
	8H	22.74	23.36	23.25	23.86	24.35	22.47	23.08	22.98	23.59	24.08
	12H	22.85	23.39	23.36	23.89	24.45	22.57	23.11	23.08	23.60	24.17
12H	4H	22.07	22.81	22.55	23.28	23.75	21.84	22.58	22.32	23.06	23.53
	6H	22.60	23.22	23.11	23.72	24.21	22.35	22.97	22.86	23.48	23.96
	8H	22.81	23.35	23.32	23.84	24.41	22.54	23.09	23.05	23.58	24.14