

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: P1439928

Luminaire Tested: S124DR-H675D935-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439928
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-H675D935-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

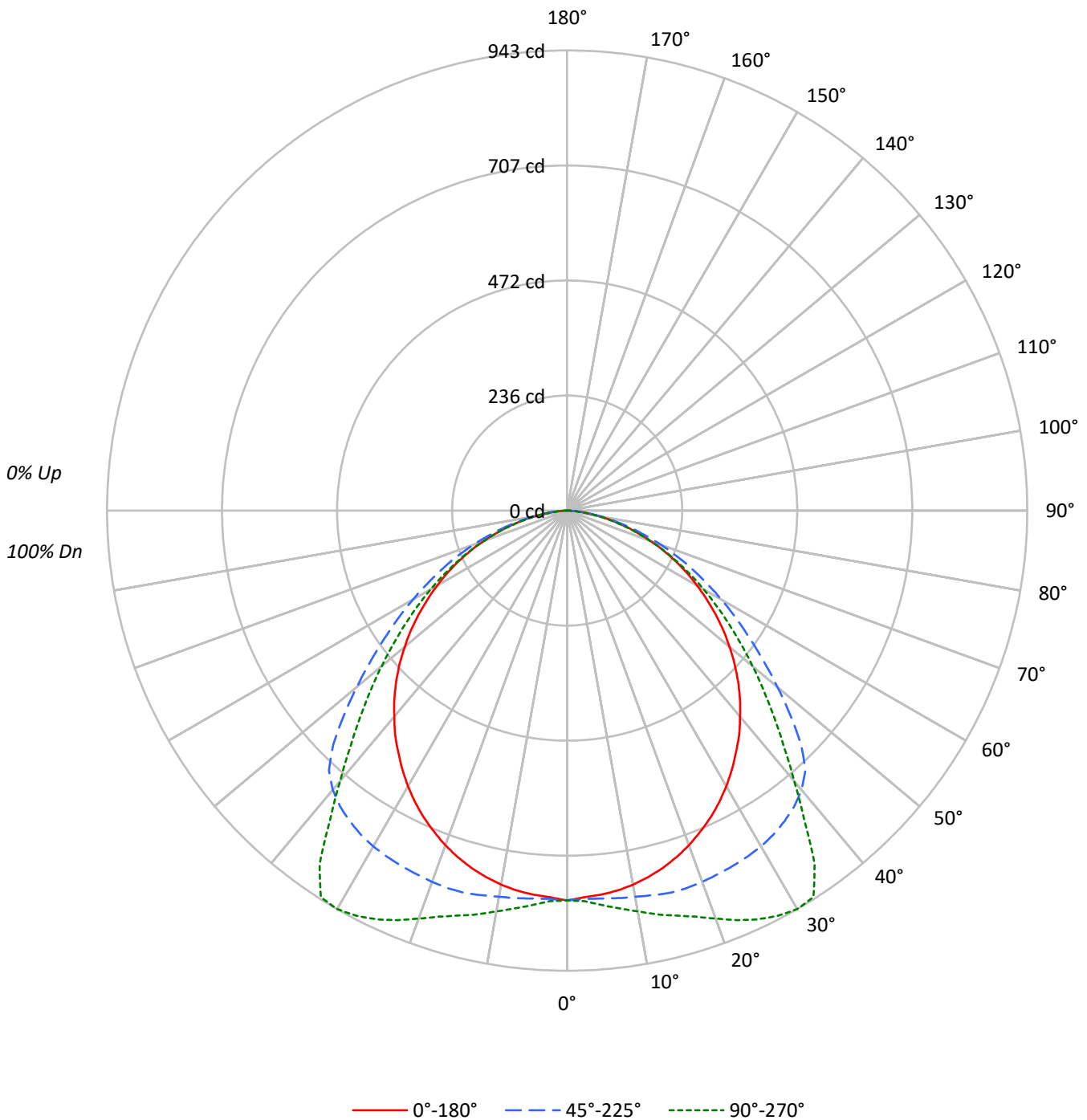
Lumens per Lamp: N/A
Luminaire Lumens: 2427.5 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (A_{in}): 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: P1439928

CATALOG NUMBER: S124DR-H675D935-X4F0-XX-UDD-FLB-W

Luminous Intensity Polar Plot





TEST NUMBER: P1439928

CATALOG NUMBER: S124DR-H675D935-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	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	67	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°	7062	7062	7062
5°	7012	7082	7200
10°	6988	7214	7487
15°	6938	7426	7864
20°	6867	7618	8371
25°	6775	7838	9016
30°	6658	8114	9627
35°	6515	8384	9543
40°	6361	8622	8350
45°	6194	8477	7507
50°	5974	7741	6825
55°	5728	7044	6235
60°	5448	6460	5712
65°	5117	5887	5215
70°	4682	5268	4661
75°	4123	4526	4045
80°	3391	3630	3274
85°	2384	2465	2222

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 8477 cd/sqm

TEST NUMBER: P1439928

CATALOG NUMBER: S124DR-H675D935-X4F0-XX-UDD-FLB-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	3.2
10°-20°	229.7	9.5
20°-30°	373.9	15.4
30°-40°	474.8	19.6
40°-50°	462.6	19.1
50°-60°	379.3	15.6
60°-70°	264.6	10.9
70°-80°	135.8	5.6
80°-90°	30.1	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°	680.2	28.0
0°-40°	1155.0	47.6
0°-60°	1996.9	82.3
0°-90°	2427.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2427.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	799	799	799	799	799	
5°	790	802	798	804	811	75
15°	758	782	811	843	859	214
25°	694	739	804	887	924	320
35°	604	662	777	890	884	378
45°	495	556	678	622	600	382
55°	372	429	457	419	404	332
65°	245	280	281	259	249	242
75°	121	134	132	123	118	129
85°	24	24	24	23	22	30
90°	0	0	0	0	0	



TEST NUMBER: P1439928

CATALOG NUMBER: S124DR-H675D935-X4F0-XX-UDD-FLB-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	798.8	798.8	798.8	798.8	798.8
2.5°	793.3	803.5	796.4	799.5	801.1
5°	790.1	801.9	798.0	803.5	811.3
7.5°	785.4	798.8	801.1	812.1	822.3
10°	778.4	794.1	803.5	822.3	834.0
12.5°	769.0	788.6	807.4	833.3	847.4
15°	758.0	781.5	811.3	843.4	859.1
17.5°	744.7	772.9	811.3	851.3	872.4
20°	729.8	762.7	809.7	861.5	889.7
22.5°	712.5	751.7	806.6	873.2	908.5
25°	694.5	739.2	803.5	886.6	924.2
27.5°	674.1	724.3	799.5	896.7	935.9
30°	652.2	706.3	794.8	901.4	943.0
32.5°	628.7	685.1	787.0	901.4	939.1
35°	603.6	662.4	776.8	889.7	884.2
37.5°	579.3	638.1	764.3	832.5	798.0
40°	551.1	612.2	747.0	751.7	723.5
42.5°	524.4	584.8	722.7	683.5	658.4
45°	495.4	556.5	678.0	621.6	600.4
47.5°	465.6	526.0	620.0	566.0	546.4
50°	434.3	495.4	562.8	513.4	496.2
52.5°	403.7	462.5	507.9	464.8	448.4
55°	371.6	428.8	457.0	418.6	404.5
57.5°	339.4	394.3	410.7	375.5	362.1
60°	308.1	357.4	365.3	334.7	323.0
62.5°	276.7	319.0	322.2	295.5	285.3
65°	244.6	279.8	281.4	258.7	249.3
67.5°	213.2	242.2	242.2	222.6	214.8
70°	181.1	205.4	203.8	188.1	180.3
72.5°	150.5	167.7	166.2	154.4	148.9
75°	120.7	134.0	132.5	123.1	118.4
77.5°	92.5	101.9	100.3	94.1	90.1
80°	66.6	72.1	71.3	66.6	64.3
82.5°	43.9	47.0	45.5	42.3	40.8
85°	23.5	24.3	24.3	22.7	21.9
87.5°	8.6	8.6	8.6	8.6	7.8
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1439928
 CATALOG NUMBER: S124DR-H675D935-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	18.48	20.07	18.84	20.39	20.70	18.26	19.86	18.63	20.17	20.49
	3H	19.98	21.42	20.36	21.75	22.11	19.73	21.17	20.11	21.50	21.86
	4H	20.48	21.83	20.88	22.18	22.56	20.23	21.58	20.63	21.93	22.31
	6H	20.80	22.05	21.21	22.42	22.81	20.54	21.80	20.95	22.16	22.55
	8H	20.88	22.08	21.31	22.47	22.87	20.62	21.81	21.04	22.20	22.60
	12H	20.92	22.07	21.35	22.45	22.88	20.65	21.80	21.08	22.18	22.61
4H	2H	19.10	20.45	19.50	20.80	21.18	18.93	20.28	19.33	20.63	21.01
	3H	20.83	21.95	21.24	22.35	22.75	20.60	21.72	21.01	22.12	22.52
	4H	21.46	22.47	21.89	22.89	23.32	21.19	22.21	21.62	22.62	23.06
	6H	21.88	22.77	22.34	23.21	23.67	21.61	22.49	22.06	22.93	23.39
	8H	22.00	22.82	22.46	23.27	23.73	21.71	22.54	22.17	22.98	23.45
	12H	22.06	22.80	22.54	23.28	23.75	21.77	22.51	22.25	22.99	23.46
8H	4H	21.70	22.52	22.16	22.97	23.43	21.47	22.29	21.93	22.74	23.20
	6H	22.22	22.91	22.72	23.40	23.87	21.97	22.65	22.46	23.14	23.62
	8H	22.39	23.00	22.90	23.51	23.99	22.11	22.73	22.62	23.24	23.72
	12H	22.49	23.04	23.00	23.53	24.09	22.21	22.76	22.72	23.25	23.81
12H	4H	21.71	22.45	22.19	22.93	23.40	21.48	22.23	21.96	22.70	23.17
	6H	22.24	22.86	22.75	23.37	23.85	22.00	22.61	22.51	23.12	23.61
	8H	22.45	23.00	22.96	23.49	24.05	22.19	22.73	22.70	23.22	23.79