

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: P1439974

Luminaire Tested: S124DR-S675D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439974
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-S675D940-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

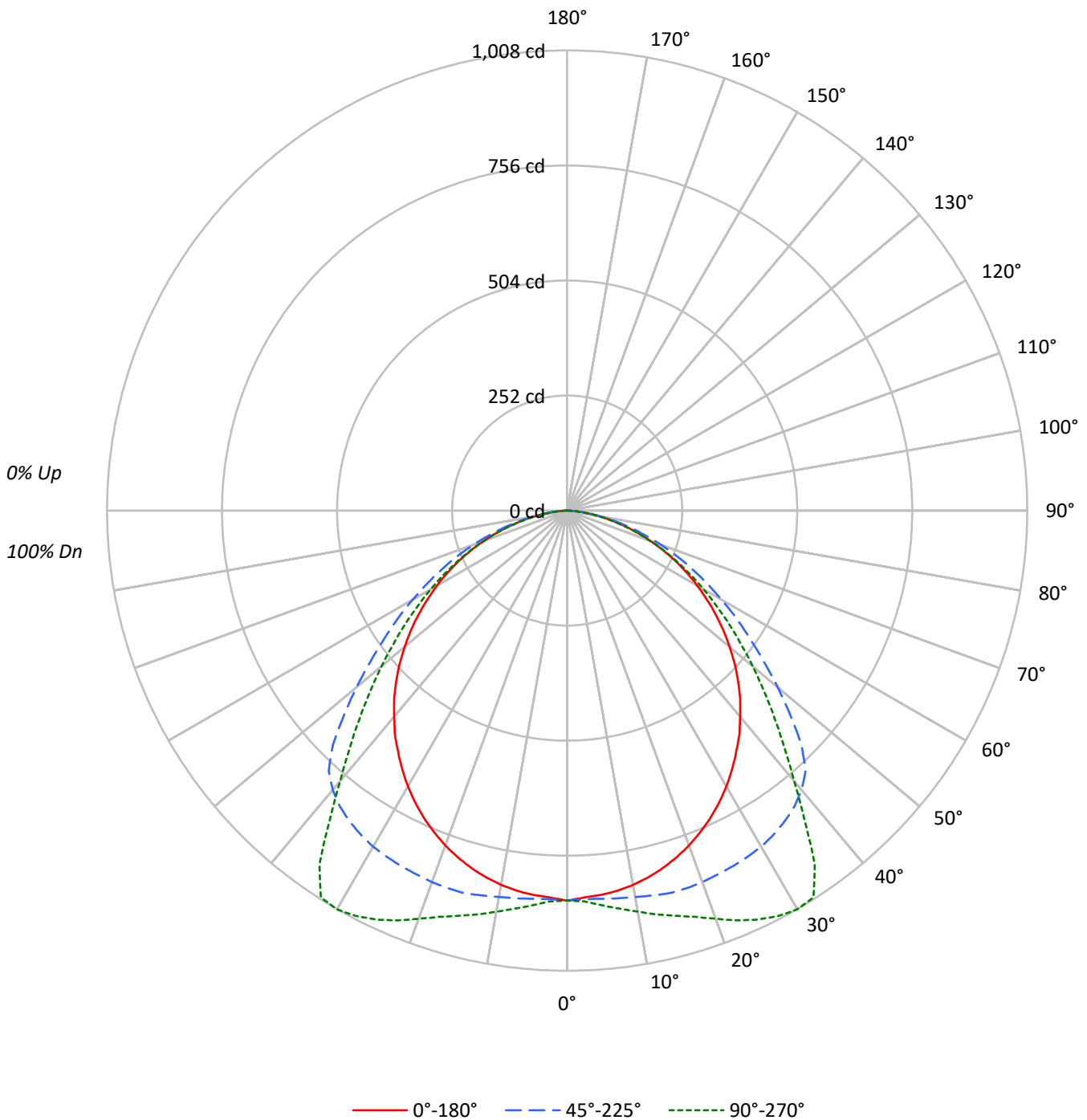
Lumens per Lamp: N/A
Luminaire Lumens: 2596.2 lumens
Efficiency: N/A
Efficacy: 98.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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: P1439974

CATALOG NUMBER: S124DR-S675D940-X4F0-XX-UDD-FLB-W

Luminous Intensity Polar Plot



TEST NUMBER: P1439974

CATALOG NUMBER: S124DR-S675D940-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	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°	7553	7553	7553
5°	7500	7574	7701
10°	7474	7715	8008
15°	7421	7942	8410
20°	7344	8148	8952
25°	7246	8383	9642
30°	7121	8679	10296
35°	6967	8967	10207
40°	6803	9221	8931
45°	6624	9068	8030
50°	6388	8279	7300
55°	6126	7535	6668
60°	5826	6909	6108
65°	5473	6297	5577
70°	5007	5635	4984
75°	4410	4841	4325
80°	3630	3885	3498
85°	2556	2638	2384

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9068 cd/sqm



TEST NUMBER: P1439974

CATALOG NUMBER: S124DR-S675D940-X4F0-XX-UDD-FLB-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.0	3.2
10°-20°	245.6	9.5
20°-30°	399.9	15.4
30°-40°	507.8	19.6
40°-50°	494.8	19.1
50°-60°	405.7	15.6
60°-70°	283.1	10.9
70°-80°	145.3	5.6
80°-90°	32.2	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°	727.5	28.0
0°-40°	1235.2	47.6
0°-60°	2135.7	82.3
0°-90°	2596.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2596.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	854	854	854	854	854	
5°	845	858	853	859	868	80
15°	811	836	868	902	919	229
25°	743	791	859	948	988	342
35°	646	708	831	952	946	404
45°	530	595	725	665	642	408
55°	397	459	489	448	433	355
65°	262	299	301	277	267	259
75°	129	143	142	132	127	137
85°	25	26	26	24	24	32
90°	0	0	0	0	0	

TEST NUMBER: P1439974

CATALOG NUMBER: S124DR-S675D940-X4F0-XX-UDD-FLB-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	854.3	854.3	854.3	854.3	854.3
2.5°	848.4	859.3	851.8	855.1	856.8
5°	845.1	857.6	853.4	859.3	867.7
7.5°	840.0	854.3	856.8	868.5	879.4
10°	832.5	849.2	859.3	879.4	892.0
12.5°	822.4	843.4	863.5	891.2	906.3
15°	810.7	835.8	867.7	902.1	918.8
17.5°	796.4	826.6	867.7	910.4	933.1
20°	780.5	815.7	866.0	921.3	951.5
22.5°	762.1	804.0	862.7	933.9	971.6
25°	742.8	790.6	859.3	948.2	988.4
27.5°	721.0	774.6	855.1	959.1	1001.0
30°	697.5	755.4	850.1	964.1	1008.5
32.5°	672.4	732.7	841.7	964.1	1004.3
35°	645.5	708.4	830.8	951.5	945.7
37.5°	619.5	682.4	817.4	890.3	853.4
40°	589.4	654.7	798.9	804.0	773.8
42.5°	560.9	625.4	773.0	731.0	704.2
45°	529.8	595.2	725.2	664.8	642.2
47.5°	498.0	562.5	663.1	605.3	584.3
50°	464.4	529.8	601.9	549.1	530.7
52.5°	431.7	494.6	543.2	497.1	479.5
55°	397.4	458.6	488.8	447.7	432.6
57.5°	363.0	421.7	439.3	401.6	387.3
60°	329.5	382.3	390.7	358.0	345.4
62.5°	295.9	341.2	344.6	316.1	305.2
65°	261.6	299.3	301.0	276.7	266.6
67.5°	228.0	259.0	259.0	238.1	229.7
70°	193.7	219.6	218.0	201.2	192.8
72.5°	161.0	179.4	177.7	165.2	159.3
75°	129.1	143.4	141.7	131.6	126.6
77.5°	98.9	109.0	107.3	100.6	96.4
80°	71.3	77.1	76.3	71.3	68.7
82.5°	46.9	50.3	48.6	45.3	43.6
85°	25.2	26.0	26.0	24.3	23.5
87.5°	9.2	9.2	9.2	9.2	8.4
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1439974
 CATALOG NUMBER: S124DR-S675D940-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	18.71	20.31	19.07	20.62	20.94	18.49	20.09	18.86	20.41	20.72
	3H	20.21	21.65	20.59	21.98	22.34	19.96	21.40	20.34	21.73	22.09
	4H	20.71	22.07	21.11	22.42	22.79	20.46	21.81	20.86	22.16	22.54
	6H	21.04	22.29	21.45	22.65	23.04	20.78	22.03	21.19	22.39	22.79
	8H	21.12	22.31	21.54	22.70	23.10	20.85	22.05	21.28	22.44	22.84
	12H	21.16	22.30	21.59	22.68	23.11	20.89	22.03	21.32	22.41	22.84
4H	2H	19.33	20.68	19.73	21.03	21.41	19.16	20.52	19.56	20.86	21.24
	3H	21.06	22.19	21.47	22.59	22.99	20.83	21.96	21.24	22.35	22.76
	4H	21.69	22.71	22.12	23.12	23.56	21.43	22.44	21.86	22.86	23.29
	6H	22.12	23.00	22.57	23.44	23.90	21.84	22.72	22.29	23.17	23.62
	8H	22.23	23.06	22.69	23.50	23.97	21.94	22.77	22.40	23.21	23.68
	12H	22.29	23.04	22.77	23.51	23.98	22.00	22.74	22.48	23.22	23.69
8H	4H	21.93	22.76	22.39	23.20	23.67	21.70	22.53	22.16	22.97	23.44
	6H	22.45	23.14	22.95	23.63	24.11	22.20	22.88	22.69	23.37	23.85
	8H	22.62	23.23	23.13	23.74	24.23	22.35	22.96	22.86	23.47	23.96
	12H	22.73	23.27	23.24	23.76	24.33	22.45	22.99	22.95	23.48	24.04
12H	4H	21.94	22.68	22.42	23.16	23.63	21.72	22.46	22.20	22.94	23.40
	6H	22.48	23.09	22.99	23.60	24.09	22.23	22.85	22.74	23.35	23.84
	8H	22.69	23.23	23.19	23.72	24.28	22.42	22.97	22.93	23.46	24.02