

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: P1439965

Luminaire Tested: S124DR-S485D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439965
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-S485D940-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

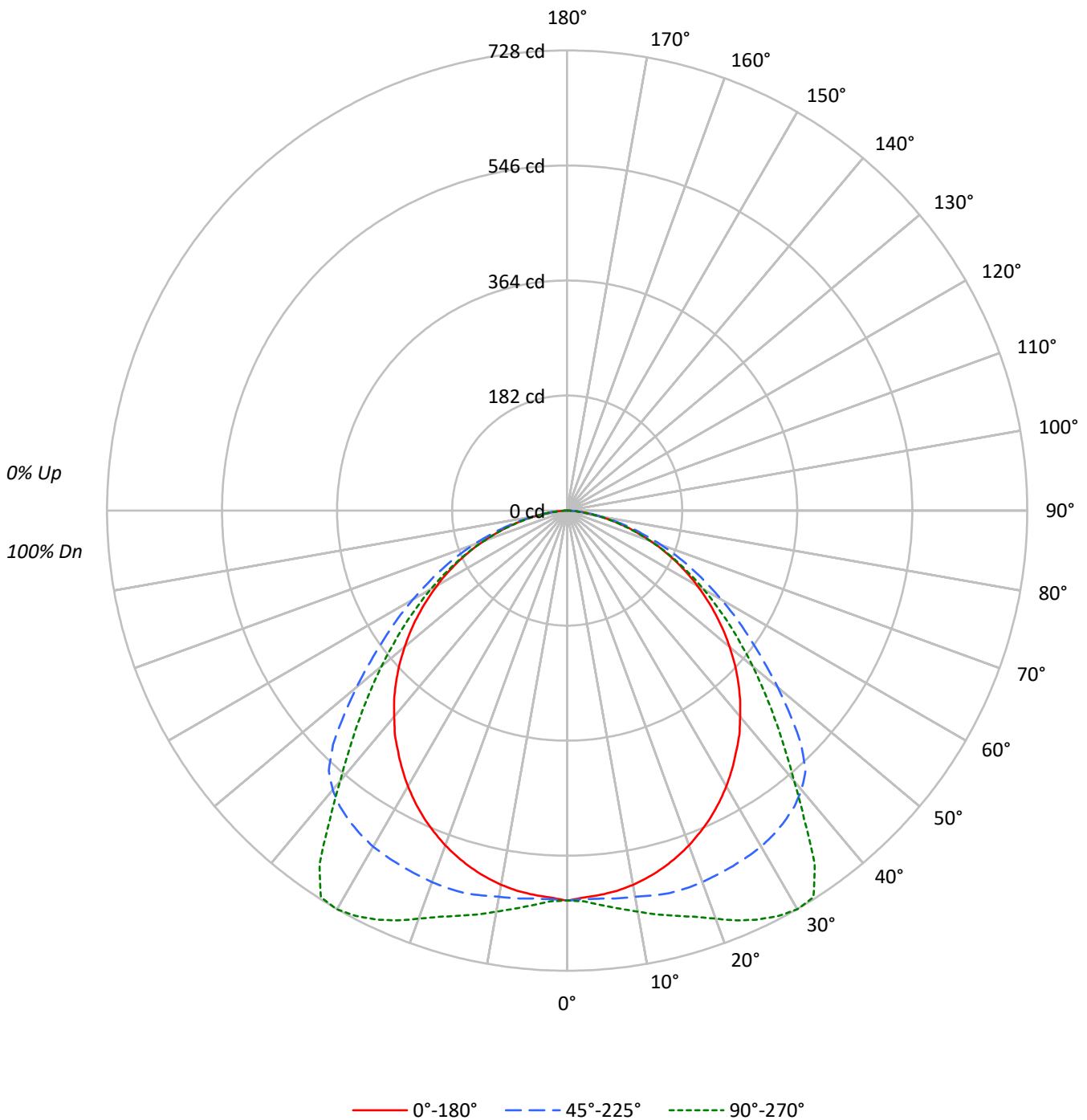
Lumens per Lamp: N/A
Luminaire Lumens: 1874.8 lumens
Efficiency: N/A
Efficacy: 98.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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: P1439965

CATALOG NUMBER: S124DR-S485D940-X4F0-XX-UDD-FLB-W

Luminous Intensity Polar Plot





TEST NUMBER: P1439965

CATALOG NUMBER: S124DR-S485D940-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	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°	5454	5454	5454
5°	5416	5470	5561
10°	5397	5571	5783
15°	5358	5735	6073
20°	5303	5884	6465
25°	5233	6053	6963
30°	5142	6267	7435
35°	5032	6476	7371
40°	4912	6660	6449
45°	4784	6548	5798
50°	4613	5979	5271
55°	4424	5441	4815
60°	4207	4988	4410
65°	3952	4546	4027
70°	3614	4069	3598
75°	3184	3495	3122
80°	2622	2805	2525
85°	1846	1907	1725

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 6548 cd/sqm



TEST NUMBER: P1439965

CATALOG NUMBER: S124DR-S485D940-X4F0-XX-UDD-FLB-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.2	3.2
10°-20°	177.4	9.5
20°-30°	288.7	15.4
30°-40°	366.7	19.6
40°-50°	357.3	19.1
50°-60°	293.0	15.6
60°-70°	204.4	10.9
70°-80°	104.9	5.6
80°-90°	23.3	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°	525.3	28.0
0°-40°	892.0	47.6
0°-60°	1542.3	82.3
0°-90°	1874.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1874.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	617	617	617	617	617	
5°	610	619	616	620	627	58
15°	585	604	627	651	664	165
25°	536	571	620	685	714	247
35°	466	512	600	687	683	292
45°	383	430	524	480	464	295
55°	287	331	353	323	312	257
65°	189	216	217	200	192	187
75°	93	104	102	95	91	99
85°	18	19	19	18	17	23
90°	0	0	0	0	0	



TEST NUMBER: P1439965

CATALOG NUMBER: S124DR-S485D940-X4F0-XX-UDD-FLB-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	616.9	616.9	616.9	616.9	616.9
2.5°	612.7	620.5	615.1	617.5	618.7
5°	610.2	619.3	616.3	620.5	626.6
7.5°	606.6	616.9	618.7	627.2	635.1
10°	601.2	613.3	620.5	635.1	644.2
12.5°	593.9	609.0	623.6	643.5	654.4
15°	585.4	603.6	626.6	651.4	663.5
17.5°	575.1	596.9	626.6	657.5	673.8
20°	563.6	589.1	625.4	665.3	687.1
22.5°	550.3	580.6	623.0	674.4	701.7
25°	536.4	570.9	620.5	684.7	713.8
27.5°	520.6	559.4	617.5	692.6	722.9
30°	503.7	545.5	613.9	696.2	728.3
32.5°	485.5	529.1	607.8	696.2	725.3
35°	466.2	511.6	600.0	687.1	682.9
37.5°	447.4	492.8	590.3	642.9	616.3
40°	425.6	472.8	577.0	580.6	558.8
42.5°	405.0	451.6	558.2	527.9	508.5
45°	382.6	429.8	523.7	480.1	463.7
47.5°	359.6	406.2	478.9	437.1	422.0
50°	335.4	382.6	434.7	396.5	383.2
52.5°	311.8	357.2	392.3	359.0	346.3
55°	287.0	331.2	353.0	323.3	312.4
57.5°	262.1	304.5	317.2	290.0	279.7
60°	237.9	276.1	282.1	258.5	249.4
62.5°	213.7	246.4	248.8	228.2	220.4
65°	188.9	216.1	217.3	199.8	192.5
67.5°	164.7	187.1	187.1	171.9	165.9
70°	139.8	158.6	157.4	145.3	139.2
72.5°	116.2	129.6	128.3	119.3	115.0
75°	93.2	103.5	102.3	95.0	91.4
77.5°	71.4	78.7	77.5	72.6	69.6
80°	51.5	55.7	55.1	51.5	49.6
82.5°	33.9	36.3	35.1	32.7	31.5
85°	18.2	18.8	18.8	17.6	17.0
87.5°	6.7	6.7	6.7	6.7	6.1
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1439965
 CATALOG NUMBER: S124DR-S485D940-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	17.58	19.18	17.94	19.49	19.81	17.36	18.96	17.73	19.28	19.59
	3H	19.08	20.52	19.46	20.85	21.21	18.83	20.27	19.21	20.60	20.96
	4H	19.58	20.94	19.98	21.28	21.66	19.33	20.68	19.73	21.03	21.41
	6H	19.90	21.16	20.32	21.52	21.91	19.65	20.90	20.06	21.26	21.65
	8H	19.99	21.18	20.41	21.57	21.97	19.72	20.92	20.15	21.30	21.70
	12H	20.03	21.17	20.46	21.55	21.98	19.76	20.90	20.19	21.28	21.71
4H	2H	18.20	19.55	18.60	19.90	20.28	18.03	19.38	18.43	19.73	20.11
	3H	19.93	21.06	20.34	21.46	21.86	19.70	20.83	20.11	21.22	21.62
	4H	20.56	21.57	20.99	21.99	22.42	20.29	21.31	20.73	21.73	22.16
	6H	20.98	21.87	21.44	22.31	22.77	20.71	21.59	21.16	22.03	22.49
	8H	21.10	21.93	21.56	22.37	22.83	20.81	21.64	21.27	22.08	22.55
	12H	21.16	21.90	21.64	22.38	22.85	20.87	21.61	21.35	22.09	22.56
8H	4H	20.80	21.63	21.26	22.07	22.54	20.57	21.39	21.03	21.84	22.30
	6H	21.32	22.01	21.82	22.50	22.97	21.07	21.75	21.56	22.24	22.72
	8H	21.49	22.10	22.00	22.61	23.10	21.22	21.83	21.73	22.34	22.83
	12H	21.60	22.14	22.10	22.63	23.19	21.32	21.86	21.82	22.35	22.91
12H	4H	20.81	21.55	21.29	22.03	22.50	20.58	21.33	21.07	21.80	22.27
	6H	21.34	21.96	21.86	22.47	22.95	21.10	21.71	21.61	22.22	22.71
	8H	21.55	22.10	22.06	22.59	23.15	21.29	21.83	21.80	22.33	22.89