

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: P1439963

Luminaire Tested: S124DR-S485D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439963
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-S485D930-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

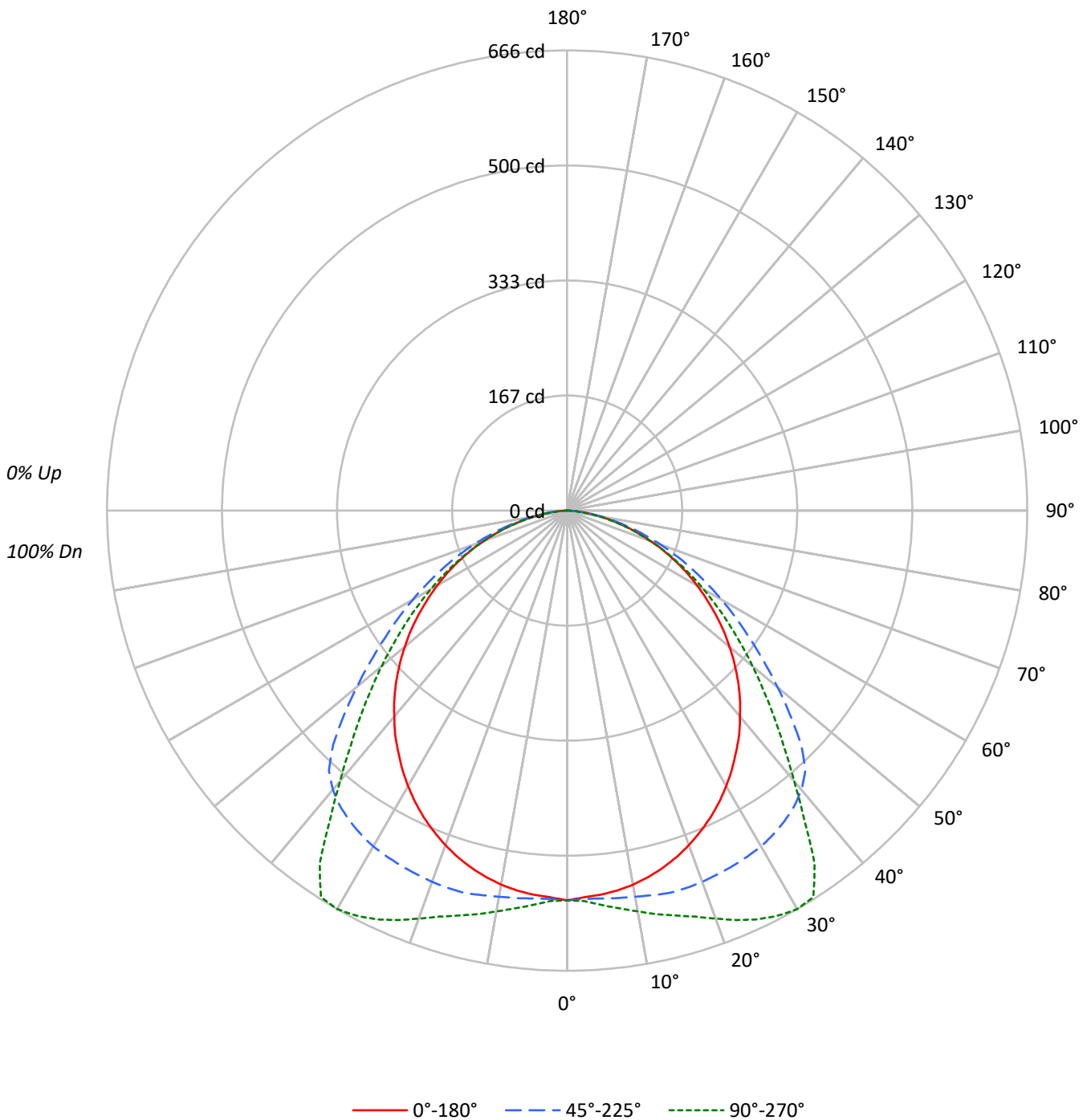
Lumens per Lamp: N/A
Luminaire Lumens: 1714.2 lumens
Efficiency: N/A
Efficacy: 89.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (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

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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°	4987	4987	4987
5°	4952	5001	5085
10°	4935	5094	5288
15°	4900	5244	5553
20°	4848	5380	5912
25°	4784	5535	6366
30°	4701	5730	6798
35°	4600	5920	6739
40°	4491	6088	5897
45°	4374	5987	5302
50°	4219	5466	4820
55°	4045	4974	4402
60°	3846	4560	4033
65°	3613	4157	3682
70°	3306	3720	3291
75°	2910	3194	2856
80°	2393	2566	2312
85°	1684	1745	1572

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 5987 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.1	3.2
10°-20°	162.2	9.5
20°-30°	264.0	15.4
30°-40°	335.3	19.6
40°-50°	326.7	19.1
50°-60°	267.8	15.6
60°-70°	186.9	10.9
70°-80°	95.9	5.6
80°-90°	21.3	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°	480.3	28.0
0°-40°	815.6	47.6
0°-60°	1410.1	82.3
0°-90°	1714.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1714.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	564	564	564	564	564	
5°	558	566	564	567	573	53
15°	535	552	573	596	607	151
25°	490	522	567	626	653	226
35°	426	468	548	628	624	267
45°	350	393	479	439	424	270
55°	262	303	323	296	286	235
65°	173	198	199	183	176	171
75°	85	95	94	87	84	91
85°	17	17	17	16	16	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	564.0	564.0	564.0	564.0	564.0
2.5°	560.2	567.4	562.4	564.6	565.7
5°	558.0	566.3	563.5	567.4	572.9
7.5°	554.6	564.0	565.7	573.5	580.7
10°	549.7	560.7	567.4	580.7	589.0
12.5°	543.0	556.8	570.1	588.4	598.4
15°	535.3	551.9	572.9	595.6	606.7
17.5°	525.9	545.8	572.9	601.1	616.1
20°	515.3	538.6	571.8	608.3	628.3
22.5°	503.2	530.8	569.6	616.6	641.5
25°	490.4	522.0	567.4	626.0	652.6
27.5°	476.0	511.5	564.6	633.2	660.9
30°	460.5	498.7	561.3	636.6	665.9
32.5°	443.9	483.8	555.7	636.6	663.1
35°	426.2	467.7	548.5	628.3	624.4
37.5°	409.1	450.6	539.7	587.8	563.5
40°	389.1	432.3	527.5	530.8	510.9
42.5°	370.3	412.9	510.4	482.7	465.0
45°	349.8	393.0	478.8	438.9	424.0
47.5°	328.8	371.4	437.8	399.6	385.8
50°	306.7	349.8	397.4	362.6	350.4
52.5°	285.1	326.6	358.7	328.2	316.6
55°	262.4	302.8	322.7	295.6	285.6
57.5°	239.7	278.4	290.0	265.1	255.7
60°	217.5	252.4	257.9	236.4	228.1
62.5°	195.4	225.3	227.5	208.7	201.5
65°	172.7	197.6	198.7	182.7	176.0
67.5°	150.6	171.0	171.0	157.2	151.7
70°	127.9	145.0	143.9	132.8	127.3
72.5°	106.3	118.5	117.3	109.0	105.2
75°	85.2	94.7	93.5	86.9	83.6
77.5°	65.3	72.0	70.9	66.4	63.7
80°	47.0	50.9	50.4	47.0	45.4
82.5°	31.0	33.2	32.1	29.9	28.8
85°	16.6	17.2	17.2	16.1	15.5
87.5°	6.1	6.1	6.1	6.1	5.5
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	17.27	18.87	17.63	19.18	19.49	17.05	18.65	17.42	18.96	19.28
	3H	18.77	20.21	19.15	20.54	20.90	18.52	19.96	18.90	20.29	20.65
	4H	19.27	20.63	19.67	20.97	21.35	19.02	20.37	19.42	20.72	21.10
	6H	19.59	20.85	20.00	21.21	21.60	19.33	20.59	19.75	20.95	21.34
	8H	19.68	20.87	20.10	21.26	21.66	19.41	20.60	19.84	20.99	21.39
	12H	19.72	20.86	20.14	21.24	21.67	19.45	20.59	19.87	20.97	21.40
4H	2H	17.89	19.24	18.29	19.59	19.97	17.72	19.07	18.12	19.42	19.80
	3H	19.62	20.75	20.03	21.14	21.54	19.39	20.51	19.80	20.91	21.31
	4H	20.25	21.26	20.68	21.68	22.11	19.98	21.00	20.41	21.41	21.85
	6H	20.67	21.56	21.13	22.00	22.46	20.40	21.28	20.85	21.72	22.18
	8H	20.79	21.61	21.25	22.06	22.52	20.50	21.33	20.96	21.77	22.24
	12H	20.85	21.59	21.33	22.07	22.54	20.56	21.30	21.04	21.78	22.25
8H	4H	20.49	21.32	20.95	21.76	22.23	20.26	21.08	20.72	21.53	21.99
	6H	21.01	21.70	21.51	22.19	22.66	20.76	21.44	21.25	21.93	22.41
	8H	21.18	21.79	21.69	22.30	22.79	20.90	21.52	21.42	22.03	22.51
	12H	21.29	21.83	21.79	22.32	22.88	21.00	21.55	21.51	22.04	22.60
12H	4H	20.50	21.24	20.98	21.72	22.19	20.27	21.02	20.75	21.49	21.96
	6H	21.03	21.65	21.54	22.16	22.64	20.79	21.40	21.30	21.91	22.40
	8H	21.24	21.79	21.75	22.28	22.84	20.98	21.52	21.49	22.01	22.58