

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: P1439981

Luminaire Tested: S124DR-S865D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439981
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-S865D930-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

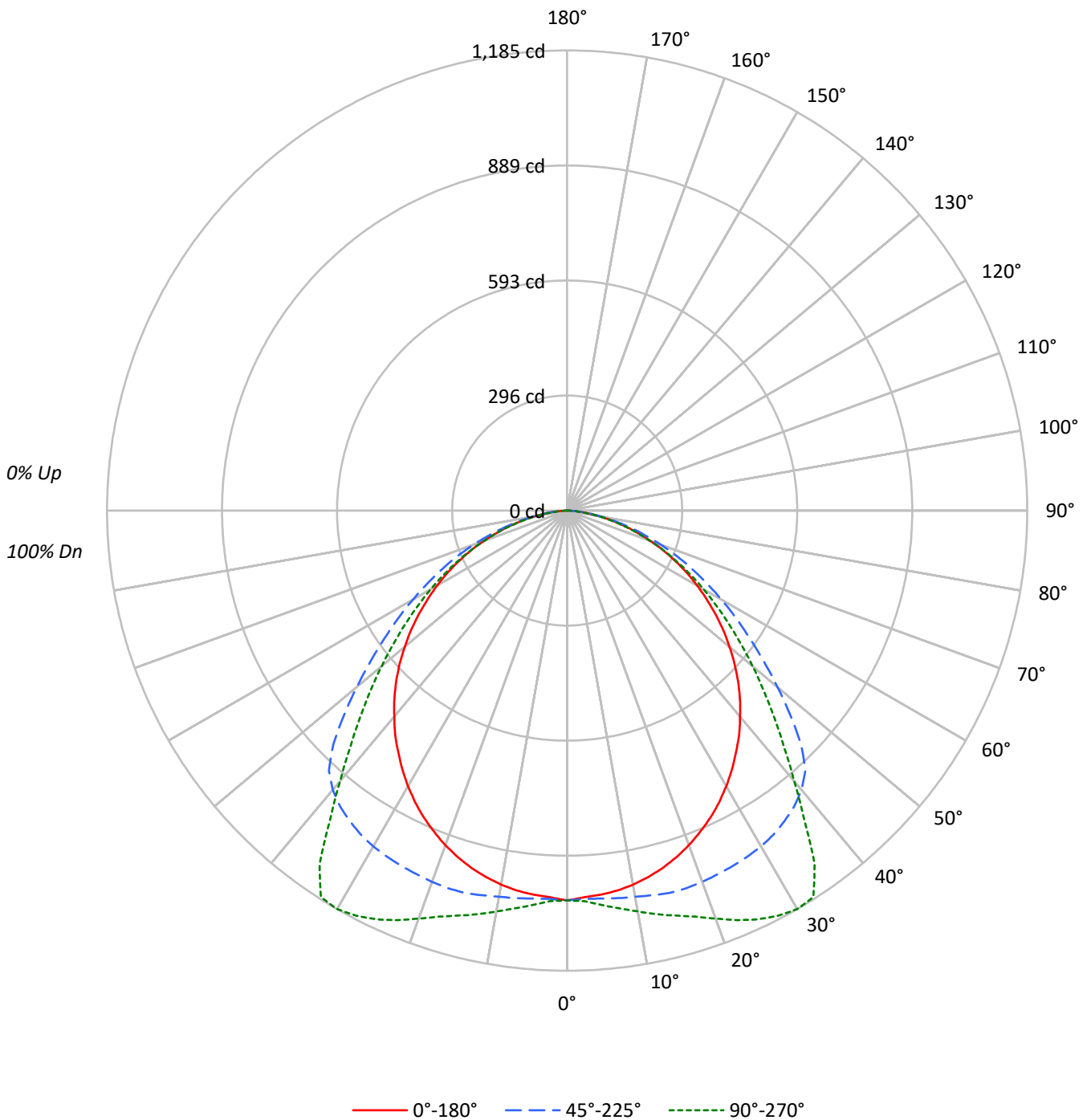
Lumens per Lamp: N/A
Luminaire Lumens: 3050.4 lumens
Efficiency: N/A
Efficacy: 87.9 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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	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°	8874	8874	8874
5°	8812	8899	9048
10°	8781	9064	9410
15°	8718	9332	9882
20°	8628	9573	10519
25°	8514	9849	11329
30°	8366	10197	12098
35°	8187	10535	11992
40°	7993	10834	10494
45°	7783	10653	9434
50°	7506	9727	8576
55°	7197	8853	7835
60°	6845	8116	7176
65°	6429	7397	6552
70°	5881	6620	5858
75°	5182	5688	5080
80°	4262	4562	4114
85°	3003	3094	2800

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 10653 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.3	3.2
10°-20°	288.6	9.5
20°-30°	469.8	15.4
30°-40°	596.6	19.6
40°-50°	581.3	19.1
50°-60°	476.6	15.6
60°-70°	332.6	10.9
70°-80°	170.7	5.6
80°-90°	37.8	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°	854.7	28.0
0°-40°	1451.3	47.6
0°-60°	2509.3	82.3
0°-90°	3050.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3050.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1004	1004	1004	1004	1004	
5°	993	1008	1003	1010	1020	94
15°	952	982	1020	1060	1080	269
25°	873	929	1010	1114	1161	402
35°	758	832	976	1118	1111	475
45°	622	699	852	781	754	480
55°	467	539	574	526	508	417
65°	307	352	354	325	313	304
75°	152	168	166	155	149	161
85°	30	30	30	29	28	37
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1003.7	1003.7	1003.7	1003.7	1003.7
2.5°	996.8	1009.6	1000.8	1004.7	1006.7
5°	992.9	1007.7	1002.7	1009.6	1019.5
7.5°	987.0	1003.7	1006.7	1020.5	1033.3
10°	978.1	997.8	1009.6	1033.3	1048.1
12.5°	966.3	990.9	1014.6	1047.1	1064.8
15°	952.5	982.1	1019.5	1059.9	1079.6
17.5°	935.8	971.2	1019.5	1069.7	1096.3
20°	917.0	958.4	1017.5	1082.5	1118.0
22.5°	895.4	944.6	1013.6	1097.3	1141.6
25°	872.7	928.9	1009.6	1114.0	1161.3
27.5°	847.1	910.2	1004.7	1126.9	1176.1
30°	819.5	887.5	998.8	1132.8	1185.0
32.5°	790.0	860.9	989.0	1132.8	1180.0
35°	758.5	832.3	976.1	1118.0	1111.1
37.5°	727.9	801.8	960.4	1046.1	1002.7
40°	692.5	769.3	938.7	944.6	909.2
42.5°	659.0	734.8	908.2	858.9	827.4
45°	622.5	699.4	852.0	781.1	754.5
47.5°	585.1	660.9	779.1	711.2	686.6
50°	545.7	622.5	707.2	645.2	623.5
52.5°	507.3	581.2	638.3	584.1	563.4
55°	466.9	538.8	574.3	526.0	508.3
57.5°	426.5	495.5	516.1	471.8	455.1
60°	387.1	449.2	459.0	420.6	405.8
62.5°	347.7	400.9	404.8	371.3	358.5
65°	307.3	351.6	353.6	325.1	313.2
67.5°	267.9	304.4	304.4	279.7	269.9
70°	227.5	258.1	256.1	236.4	226.6
72.5°	189.1	210.8	208.8	194.0	187.2
75°	151.7	168.4	166.5	154.6	148.7
77.5°	116.2	128.1	126.1	118.2	113.3
80°	83.7	90.6	89.6	83.7	80.8
82.5°	55.2	59.1	57.1	53.2	51.2
85°	29.6	30.5	30.5	28.6	27.6
87.5°	10.8	10.8	10.8	10.8	9.9
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	19.27	20.87	19.63	21.18	21.50	19.05	20.65	19.42	20.97	21.28
	3H	20.77	22.21	21.15	22.54	22.90	20.52	21.96	20.90	22.29	22.65
	4H	21.28	22.63	21.67	22.98	23.35	21.02	22.37	21.42	22.72	23.10
	6H	21.60	22.85	22.01	23.21	23.60	21.34	22.59	21.75	22.95	23.35
	8H	21.68	22.87	22.10	23.26	23.66	21.41	22.61	21.84	23.00	23.40
	12H	21.72	22.86	22.15	23.24	23.67	21.45	22.59	21.88	22.97	23.40
4H	2H	19.89	21.24	20.29	21.59	21.97	19.72	21.07	20.12	21.42	21.80
	3H	21.62	22.75	22.03	23.15	23.55	21.39	22.52	21.80	22.91	23.31
	4H	22.25	23.27	22.68	23.68	24.12	21.99	23.00	22.42	23.42	23.85
	6H	22.68	23.56	23.13	24.00	24.46	22.40	23.28	22.85	23.73	24.18
	8H	22.79	23.62	23.25	24.06	24.53	22.50	23.33	22.96	23.77	24.24
	12H	22.85	23.60	23.33	24.07	24.54	22.56	23.30	23.04	23.78	24.25
8H	4H	22.49	23.32	22.95	23.76	24.23	22.26	23.09	22.72	23.53	23.99
	6H	23.01	23.70	23.51	24.19	24.67	22.76	23.44	23.25	23.93	24.41
	8H	23.18	23.79	23.69	24.30	24.79	22.91	23.52	23.42	24.03	24.52
	12H	23.29	23.83	23.80	24.32	24.89	23.01	23.55	23.51	24.04	24.60
12H	4H	22.50	23.24	22.98	23.72	24.19	22.28	23.02	22.76	23.49	23.96
	6H	23.04	23.65	23.55	24.16	24.65	22.79	23.41	23.30	23.91	24.40
	8H	23.25	23.79	23.75	24.28	24.84	22.98	23.53	23.49	24.02	24.58