

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: P1439846

Luminaire Tested: S123DR-S865D930-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439846
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G3-2603-719-3)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DR-S865D930-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

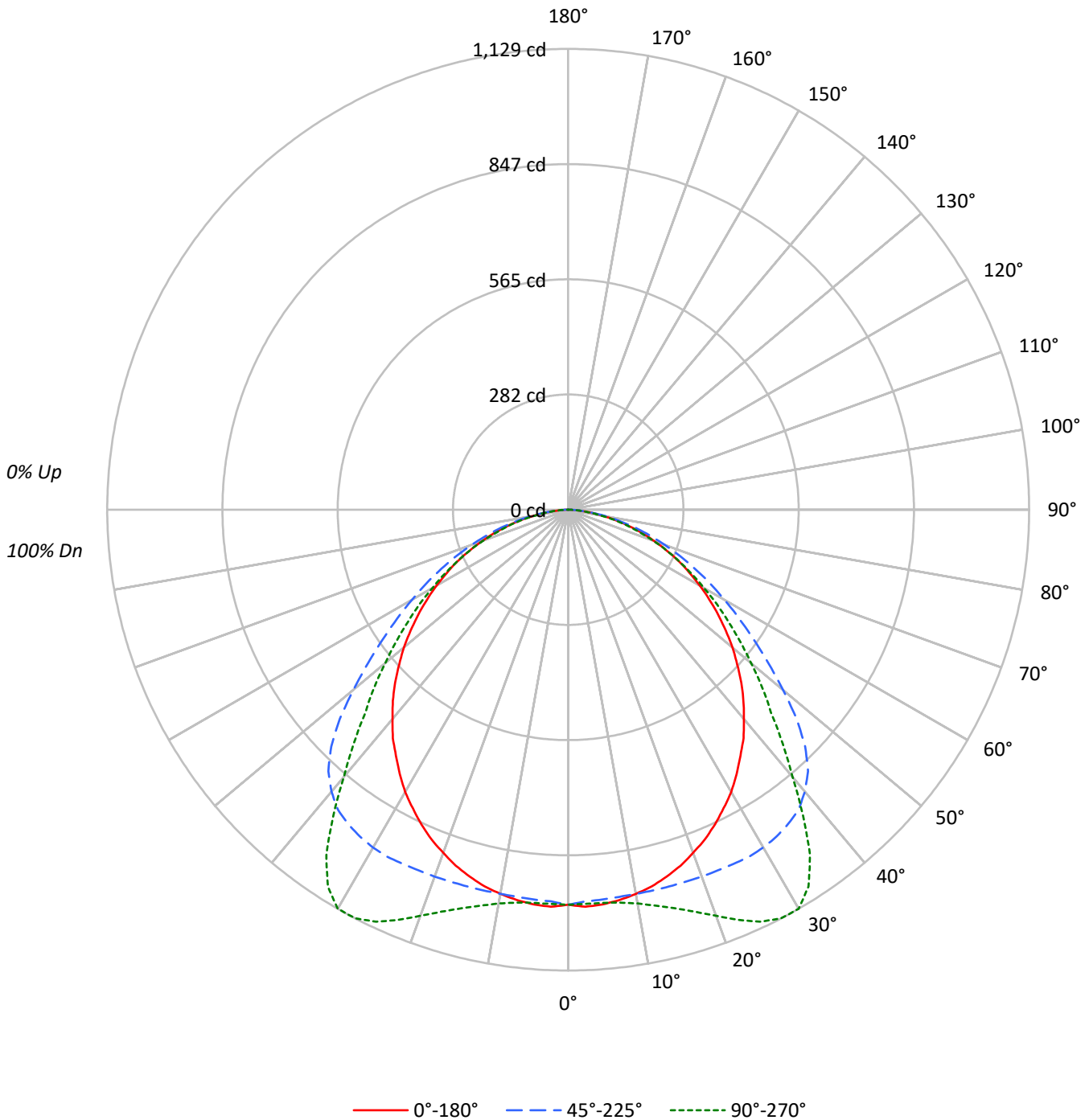
Lumens per Lamp: N/A
Luminaire Lumens: 2926.6 lumens
Efficiency: N/A
Efficacy: 84.3 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
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	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	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85					85			
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71					71			
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60					60			
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52					52			
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45					45			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34					34			
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31					31			
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	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°	11666	11666	11666
5°	11747	11601	11698
10°	11699	11699	11993
15°	11615	11928	12614
20°	11477	12273	13582
25°	11314	12739	14815
30°	11116	13303	15713
35°	10824	13829	15198
40°	10535	14188	13449
45°	10220	13990	11976
50°	9853	12874	10961
55°	9423	11651	10075
60°	8975	10665	9264
65°	8536	9762	8564
70°	7900	8855	7759
75°	7132	7877	6945
80°	5978	6603	5693
85°	4565	4842	4288

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13990 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.1	3.1
10°-20°	273.8	9.4
20°-30°	448.7	15.3
30°-40°	567.6	19.4
40°-50°	554.5	18.9
50°-60°	455.5	15.6
60°-70°	321.3	11.0
70°-80°	171.3	5.9
80°-90°	41.7	1.4
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°	814.6	27.8
0°-40°	1382.2	47.2
0°-60°	2392.2	81.7
0°-90°	2926.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2926.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	968	968	968	968	968	
5°	971	967	959	969	967	92
15°	931	936	956	999	1011	262
25°	850	876	958	1074	1114	392
35°	735	786	940	1049	1033	461
45°	599	667	820	740	702	462
55°	448	515	554	498	479	401
65°	299	342	342	312	300	295
75°	153	172	169	153	149	162
85°	33	36	35	32	31	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	967.6	967.6	967.6	967.6	967.6
2.5°	973.6	970.6	960.6	969.6	966.6
5°	970.6	966.6	958.6	968.6	966.6
7.5°	964.6	962.6	956.6	971.6	970.6
10°	955.6	954.6	955.6	977.6	979.6
12.5°	945.6	946.6	955.6	986.6	993.6
15°	930.6	935.6	955.6	998.6	1010.6
17.5°	914.6	922.6	955.6	1014.6	1032.6
20°	894.5	908.5	956.6	1031.6	1058.6
22.5°	874.5	891.5	956.6	1054.6	1087.7
25°	850.5	875.5	957.6	1073.6	1113.7
27.5°	824.5	854.5	958.6	1088.7	1128.7
30°	798.5	834.5	955.6	1094.7	1128.7
32.5°	767.5	811.5	949.6	1084.7	1094.7
35°	735.4	786.5	939.6	1048.6	1032.6
37.5°	705.4	759.5	926.6	982.6	944.6
40°	669.4	730.4	901.5	898.5	854.5
42.5°	635.4	699.4	869.5	813.5	777.5
45°	599.4	667.4	820.5	740.4	702.4
47.5°	561.3	632.4	758.5	671.4	644.4
50°	525.3	596.4	686.4	608.4	584.4
52.5°	486.3	558.3	617.4	552.3	531.3
55°	448.3	515.3	554.3	498.3	479.3
57.5°	410.2	473.3	496.3	447.3	432.3
60°	372.2	429.3	442.3	400.2	384.2
62.5°	335.2	388.2	392.2	355.2	341.2
65°	299.2	342.2	342.2	312.2	300.2
67.5°	261.2	298.2	296.2	268.2	261.2
70°	224.1	255.2	251.2	228.1	220.1
72.5°	189.1	212.1	209.1	191.1	182.1
75°	153.1	172.1	169.1	153.1	149.1
77.5°	119.1	132.1	129.1	118.1	115.1
80°	86.1	96.1	95.1	87.1	82.0
82.5°	58.0	63.0	62.0	57.0	54.0
85°	33.0	36.0	35.0	32.0	31.0
87.5°	13.0	15.0	16.0	15.0	14.0
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	20.17	21.78	20.54	22.09	22.41	19.90	21.51	20.27	21.82	22.13
	3H	21.74	23.19	22.12	23.52	23.88	21.42	22.86	21.79	23.19	23.55
	4H	22.29	23.65	22.69	24.00	24.38	21.95	23.31	22.35	23.66	24.04
	6H	22.66	23.92	23.07	24.28	24.67	22.31	23.57	22.72	23.93	24.32
	8H	22.76	23.96	23.18	24.35	24.75	22.40	23.60	22.83	23.99	24.39
	12H	22.81	23.96	23.24	24.35	24.77	22.45	23.60	22.88	23.99	24.42
4H	2H	20.81	22.17	21.21	22.52	22.90	20.60	21.96	21.00	22.31	22.68
	3H	22.62	23.75	23.03	24.15	24.55	22.32	23.45	22.72	23.85	24.25
	4H	23.31	24.33	23.74	24.75	25.18	22.95	23.98	23.38	24.39	24.83
	6H	23.79	24.68	24.24	25.12	25.58	23.41	24.30	23.87	24.75	25.20
	8H	23.92	24.76	24.38	25.20	25.67	23.54	24.37	24.00	24.82	25.28
	12H	24.01	24.76	24.49	25.23	25.70	23.62	24.37	24.10	24.84	25.31
8H	4H	23.57	24.41	24.03	24.85	25.32	23.26	24.09	23.72	24.54	25.00
	6H	24.16	24.86	24.66	25.35	25.82	23.82	24.51	24.31	25.00	25.48
	8H	24.36	24.98	24.87	25.49	25.97	24.00	24.62	24.51	25.13	25.61
	12H	24.50	25.05	25.01	25.54	26.10	24.13	24.68	24.64	25.17	25.73
12H	4H	23.59	24.34	24.07	24.81	25.28	23.29	24.03	23.77	24.51	24.98
	6H	24.20	24.82	24.71	25.33	25.81	23.86	24.49	24.37	24.99	25.48
	8H	24.44	24.99	24.95	25.48	26.04	24.09	24.64	24.60	25.13	25.70