

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: P1439800

Luminaire Tested: S123DR-H865D927-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439800
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-H865D927-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

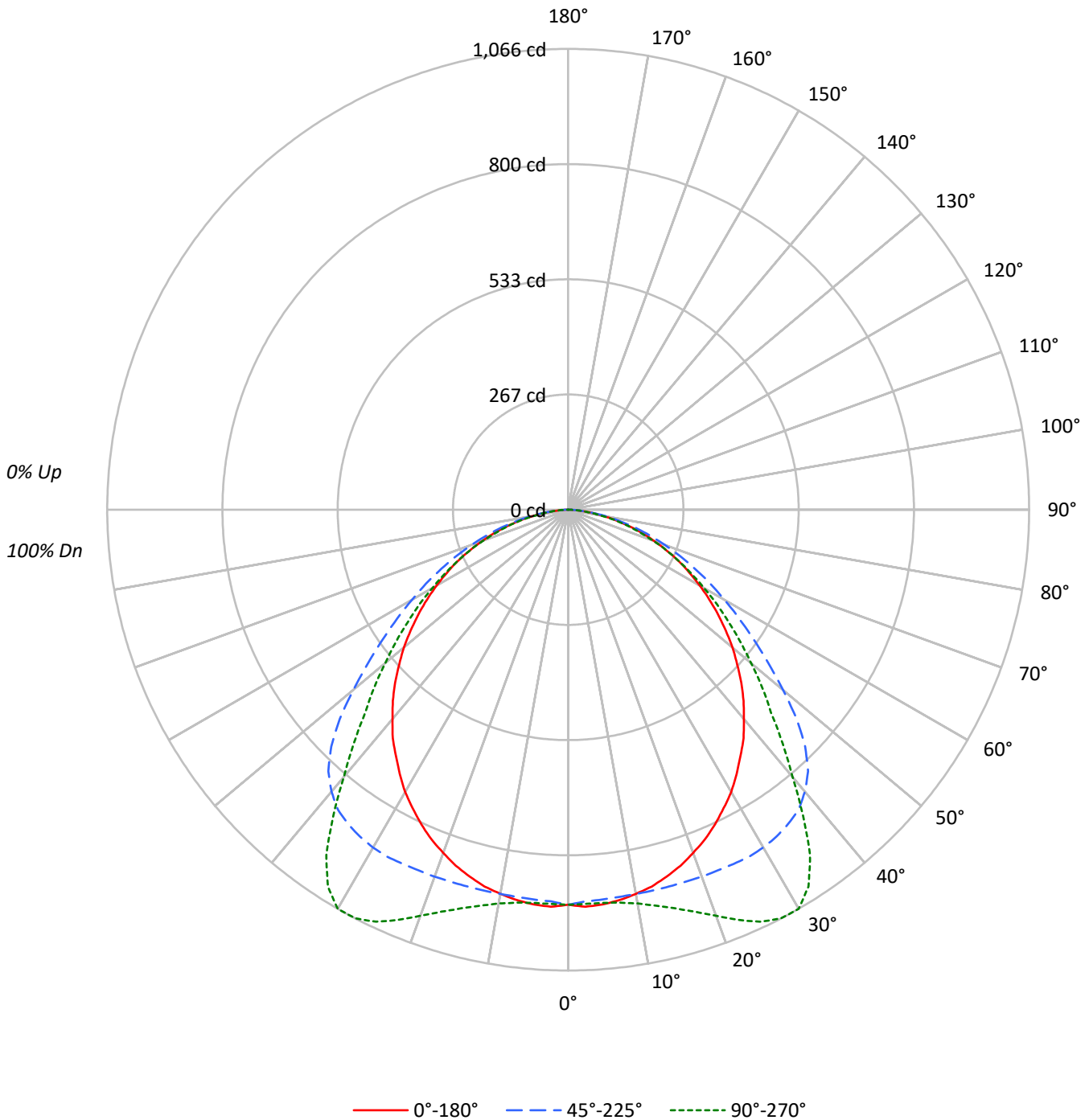
Lumens per Lamp: N/A
Luminaire Lumens: 2763.4 lumens
Efficiency: N/A
Efficacy: 89.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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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CATALOG NUMBER: S123DR-H865D927-X4F0-XX-UDD-FLB-W

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	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	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°	11016	11016	11016
5°	11092	10954	11046
10°	11046	11046	11324
15°	10968	11262	11911
20°	10838	11589	12825
25°	10683	12028	13989
30°	10497	12561	14838
35°	10222	13058	14352
40°	9948	13398	12699
45°	9650	13211	11309
50°	9303	12158	10350
55°	8898	11002	9514
60°	8476	10070	8748
65°	8059	9217	8085
70°	7459	8361	7329
75°	6736	7439	6559
80°	5645	6235	5381
85°	4316	4579	4053

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 13211 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	87.0	3.1
10°-20°	258.5	9.4
20°-30°	423.7	15.3
30°-40°	535.9	19.4
40°-50°	523.6	18.9
50°-60°	430.1	15.6
60°-70°	303.4	11.0
70°-80°	161.7	5.9
80°-90°	39.4	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°	769.2	27.8
0°-40°	1305.1	47.2
0°-60°	2258.9	81.7
0°-90°	2763.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2763.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	916	913	905	915	913	87
15°	879	883	902	943	954	248
25°	803	827	904	1014	1052	370
35°	694	743	887	990	975	435
45°	566	630	775	699	663	436
55°	423	487	523	470	453	379
65°	282	323	323	295	283	279
75°	145	162	160	145	141	153
85°	31	34	33	30	29	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	913.7	913.7	913.7	913.7	913.7
2.5°	919.3	916.5	907.0	915.5	912.7
5°	916.5	912.7	905.1	914.6	912.7
7.5°	910.8	908.9	903.3	917.4	916.5
10°	902.3	901.4	902.3	923.1	925.0
12.5°	892.9	893.8	902.3	931.6	938.2
15°	878.7	883.4	902.3	942.9	954.3
17.5°	863.6	871.1	902.3	958.1	975.1
20°	844.7	857.9	903.3	974.1	999.6
22.5°	825.8	841.8	903.3	995.9	1027.0
25°	803.1	826.7	904.2	1013.8	1051.6
27.5°	778.5	806.9	905.1	1028.0	1065.8
30°	754.0	788.0	902.3	1033.6	1065.8
32.5°	724.7	766.3	896.6	1024.2	1033.6
35°	694.5	742.6	887.2	990.2	975.1
37.5°	666.1	717.1	874.9	927.8	891.9
40°	632.1	689.7	851.3	848.5	806.9
42.5°	600.0	660.4	821.1	768.1	734.1
45°	566.0	630.2	774.8	699.2	663.3
47.5°	530.1	597.1	716.2	634.0	608.5
50°	496.0	563.1	648.2	574.5	551.8
52.5°	459.2	527.2	583.0	521.5	501.7
55°	423.3	486.6	523.4	470.5	452.6
57.5°	387.4	446.9	468.6	422.3	408.2
60°	351.5	405.3	417.6	377.9	362.8
62.5°	316.5	366.6	370.4	335.4	322.2
65°	282.5	323.1	323.1	294.8	283.4
67.5°	246.6	281.6	279.7	253.2	246.6
70°	211.6	240.9	237.2	215.4	207.9
72.5°	178.6	200.3	197.5	180.5	172.0
75°	144.6	162.5	159.7	144.6	140.8
77.5°	112.4	124.7	121.9	111.5	108.7
80°	81.3	90.7	89.8	82.2	77.5
82.5°	54.8	59.5	58.6	53.9	51.0
85°	31.2	34.0	33.1	30.2	29.3
87.5°	12.3	14.2	15.1	14.2	13.2
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	19.97	21.58	20.34	21.89	22.21	19.70	21.31	20.07	21.62	21.93
	3H	21.54	22.99	21.92	23.32	23.68	21.22	22.66	21.59	22.99	23.35
	4H	22.10	23.46	22.49	23.80	24.18	21.75	23.11	22.15	23.46	23.84
	6H	22.46	23.72	22.87	24.08	24.47	22.11	23.37	22.52	23.73	24.12
	8H	22.56	23.76	22.98	24.15	24.55	22.20	23.40	22.63	23.79	24.19
	12H	22.61	23.76	23.04	24.15	24.58	22.26	23.41	22.68	23.79	24.22
4H	2H	20.61	21.97	21.01	22.32	22.70	20.40	21.76	20.80	22.11	22.48
	3H	22.42	23.55	22.83	23.95	24.35	22.12	23.25	22.53	23.65	24.05
	4H	23.11	24.13	23.54	24.55	24.98	22.75	23.78	23.18	24.19	24.63
	6H	23.59	24.48	24.04	24.92	25.38	23.21	24.11	23.67	24.55	25.00
	8H	23.72	24.56	24.18	25.00	25.47	23.34	24.17	23.80	24.62	25.08
	12H	23.81	24.56	24.29	25.03	25.50	23.42	24.17	23.90	24.64	25.11
8H	4H	23.37	24.21	23.83	24.65	25.12	23.06	23.90	23.52	24.34	24.80
	6H	23.96	24.66	24.46	25.15	25.62	23.62	24.31	24.12	24.80	25.28
	8H	24.16	24.78	24.67	25.29	25.77	23.80	24.42	24.31	24.93	25.42
	12H	24.30	24.85	24.81	25.34	25.90	23.93	24.48	24.44	24.97	25.53
12H	4H	23.39	24.14	23.87	24.61	25.08	23.09	23.84	23.57	24.31	24.78
	6H	24.00	24.62	24.51	25.13	25.61	23.66	24.29	24.18	24.79	25.28
	8H	24.24	24.79	24.75	25.28	25.84	23.89	24.44	24.40	24.93	25.50