

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: P1439632

Luminaire Tested: S122DR-H1005D940-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439632  
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2602-702-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/2/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DR-H1005D940-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

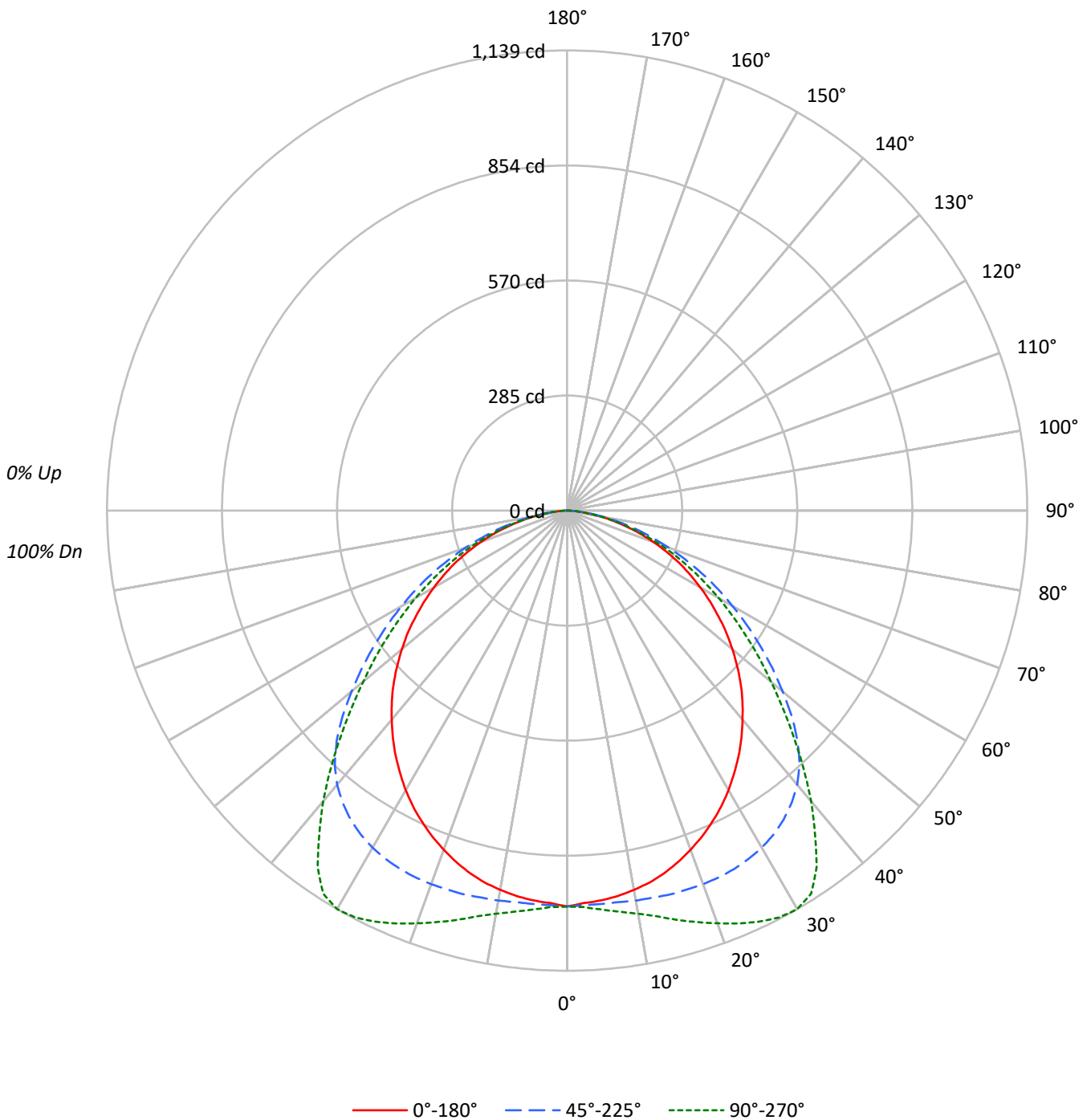
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3014.0 lumens  
Efficiency: N/A  
Efficacy: 82.3 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.6  
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	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	26	37	31	26	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	18567	18567	18567
5°	18419	18588	18855
10°	18338	18853	19490
15°	18222	19296	20571
20°	18010	19835	21916
25°	17769	20459	23469
30°	17480	21076	24924
35°	17124	21604	24905
40°	16704	21905	23228
45°	16288	21614	21271
50°	15736	20508	19418
55°	15112	19237	17847
60°	14437	17915	16418
65°	13655	16511	14969
70°	12563	14751	13411
75°	11097	12781	11566
80°	9176	10147	9176
85°	6087	6652	6369

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 21783 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.7	3.1
10°-20°	279.9	9.3
20°-30°	454.2	15.1
30°-40°	574.7	19.1
40°-50°	575.6	19.1
50°-60°	482.1	16.0
60°-70°	339.7	11.3
70°-80°	175.3	5.8
80°-90°	38.8	1.3
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°	827.8	27.5
0°-40°	1402.5	46.5
0°-60°	2460.1	81.6
0°-90°	3014.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3014.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	980	980	980	980	980	
5°	968	985	977	982	991	92
15°	929	956	984	1023	1049	262
25°	850	896	979	1074	1123	392
35°	740	800	934	1055	1077	463
45°	608	672	807	813	794	468
55°	458	514	582	558	540	409
65°	305	339	368	345	334	301
75°	152	167	175	162	158	161
85°	28	31	31	31	29	36
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	980.0	980.0	980.0	980.0	980.0
2.5°	972.3	987.6	977.4	978.7	982.5
5°	968.5	985.1	977.4	982.5	991.4
7.5°	962.1	980.0	977.4	987.6	1001.6
10°	953.2	973.6	980.0	997.8	1013.1
12.5°	943.0	964.7	981.2	1009.3	1028.4
15°	929.0	955.7	983.8	1023.3	1048.8
17.5°	912.4	944.3	983.8	1038.6	1067.9
20°	893.3	930.3	983.8	1051.3	1087.0
22.5°	872.9	913.7	982.5	1062.8	1106.1
25°	850.0	895.9	978.7	1074.3	1122.7
27.5°	825.8	875.5	972.3	1083.2	1135.4
30°	799.0	852.5	963.4	1087.0	1139.3
32.5°	769.7	828.3	950.7	1079.4	1124.0
35°	740.4	800.3	934.1	1055.1	1076.8
37.5°	708.5	771.0	912.4	1008.0	1008.0
40°	675.4	739.1	885.7	943.0	939.2
42.5°	642.3	706.0	851.3	879.3	866.5
45°	607.9	671.6	806.7	813.0	793.9
47.5°	570.9	633.3	754.4	745.5	723.8
50°	533.9	595.1	695.8	680.5	658.8
52.5°	497.0	555.6	639.7	618.1	598.9
55°	457.5	513.6	582.4	558.2	540.3
57.5°	419.3	471.5	527.6	500.8	485.5
60°	381.0	428.2	472.8	447.3	433.3
62.5°	342.8	383.6	420.5	395.0	382.3
65°	304.6	339.0	368.3	345.3	333.9
67.5°	265.1	295.6	316.0	295.6	288.0
70°	226.8	251.0	266.3	248.5	242.1
72.5°	188.6	209.0	219.2	205.2	198.8
75°	151.6	166.9	174.6	161.8	158.0
77.5°	116.0	127.4	131.3	122.3	117.2
80°	84.1	90.5	93.0	86.7	84.1
82.5°	52.2	57.3	59.9	54.8	53.5
85°	28.0	30.6	30.6	30.6	29.3
87.5°	10.2	12.7	12.7	12.7	11.5
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	21.63	23.25	22.00	23.56	23.88	22.15	23.76	22.51	24.07	24.39
	3H	23.21	24.66	23.58	24.99	25.35	23.62	25.07	23.99	25.40	25.76
	4H	23.74	25.11	24.14	25.46	25.83	24.11	25.47	24.51	25.82	26.20
	6H	24.08	25.35	24.50	25.71	26.11	24.41	25.67	24.82	26.04	26.43
	8H	24.17	25.37	24.59	25.76	26.16	24.48	25.69	24.91	26.08	26.48
	12H	24.20	25.36	24.63	25.74	26.17	24.52	25.67	24.95	26.05	26.48
4H	2H	22.39	23.76	22.79	24.10	24.48	22.79	24.15	23.19	24.50	24.88
	3H	24.16	25.30	24.57	25.70	26.10	24.45	25.59	24.86	25.99	26.39
	4H	24.81	25.84	25.24	26.25	26.69	25.05	26.07	25.48	26.49	26.92
	6H	25.25	26.15	25.70	26.59	27.04	25.44	26.34	25.90	26.78	27.24
	8H	25.36	26.20	25.82	26.64	27.11	25.54	26.38	26.00	26.82	27.29
	12H	25.42	26.17	25.90	26.65	27.12	25.60	26.35	26.08	26.83	27.30
8H	4H	25.09	25.93	25.55	26.37	26.84	25.30	26.14	25.77	26.59	27.05
	6H	25.63	26.32	26.12	26.81	27.29	25.79	26.48	26.28	26.97	27.45
	8H	25.79	26.41	26.30	26.92	27.40	25.93	26.56	26.44	27.06	27.55
	12H	25.89	26.44	26.40	26.93	27.49	26.03	26.58	26.54	27.08	27.64
12H	4H	25.11	25.86	25.59	26.33	26.80	25.32	26.07	25.80	26.55	27.02
	6H	25.66	26.28	26.17	26.79	27.27	25.82	26.44	26.33	26.95	27.43
	8H	25.86	26.41	26.37	26.90	27.47	26.00	26.56	26.51	27.05	27.61