

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: P1439809

Luminaire Tested: S123DR-S1005D927-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439809  
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-S1005D927-X4F0-XX-UDD-FLB-W  
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

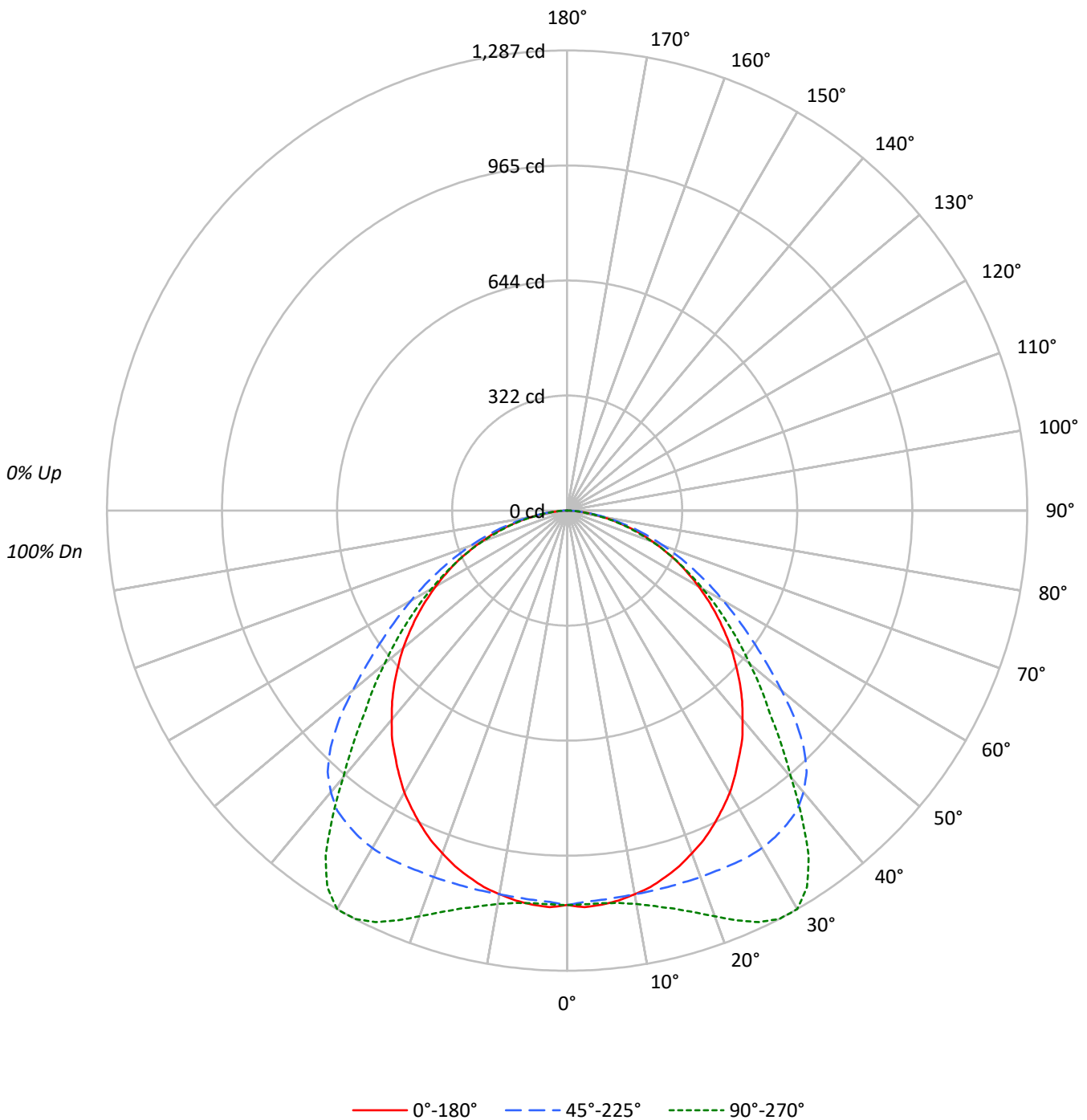
Lumens per Lamp: N/A  
Luminaire Lumens: 3337.2 lumens  
Efficiency: N/A  
Efficacy: 79.6 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52  
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')  
CIE Type: Direct

Input Watts (W): 41.9  
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	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°	13303	13303	13303
5°	13395	13229	13339
10°	13341	13341	13676
15°	13244	13601	14384
20°	13088	13995	15489
25°	12902	14527	16893
30°	12676	15170	17918
35°	12343	15769	17331
40°	12013	16181	15336
45°	11654	15952	13657
50°	11235	14681	12499
55°	10745	13287	11487
60°	10236	12160	10564
65°	9734	11132	9765
70°	9010	10096	8848
75°	8133	8981	7919
80°	6811	7526	6499
85°	5215	5519	4897

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 15952 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	105.1	3.1
10°-20°	312.2	9.4
20°-30°	511.6	15.3
30°-40°	647.2	19.4
40°-50°	632.3	18.9
50°-60°	519.5	15.6
60°-70°	366.4	11.0
70°-80°	195.3	5.9
80°-90°	47.6	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°	928.9	27.8
0°-40°	1576.1	47.2
0°-60°	2727.9	81.7
0°-90°	3337.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3337.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1103	1103	1103	1103	1103	
5°	1107	1102	1093	1104	1102	105
15°	1061	1067	1090	1139	1152	299
25°	970	998	1092	1224	1270	447
35°	839	897	1071	1196	1178	525
45°	684	761	936	844	801	527
55°	511	588	632	568	546	457
65°	341	390	390	356	342	337
75°	175	196	193	175	170	185
85°	38	41	40	36	35	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1103.4	1103.4	1103.4	1103.4	1103.4
2.5°	1110.2	1106.8	1095.4	1105.6	1102.2
5°	1106.8	1102.2	1093.1	1104.5	1102.2
7.5°	1099.9	1097.7	1090.8	1107.9	1106.8
10°	1089.7	1088.5	1089.7	1114.8	1117.1
12.5°	1078.3	1079.4	1089.7	1125.0	1133.0
15°	1061.1	1066.8	1089.7	1138.7	1152.4
17.5°	1042.9	1052.0	1089.7	1157.0	1177.5
20°	1020.1	1036.0	1090.8	1176.4	1207.2
22.5°	997.2	1016.6	1090.8	1202.6	1240.3
25°	969.9	998.4	1092.0	1224.3	1269.9
27.5°	940.2	974.4	1093.1	1241.4	1287.1
30°	910.5	951.6	1089.7	1248.3	1287.1
32.5°	875.2	925.4	1082.8	1236.9	1248.3
35°	838.6	896.8	1071.4	1195.8	1177.5
37.5°	804.4	866.0	1056.6	1120.5	1077.1
40°	763.3	832.9	1028.1	1024.6	974.4
42.5°	724.5	797.6	991.5	927.6	886.6
45°	683.5	761.1	935.6	844.4	801.0
47.5°	640.1	721.1	864.9	765.6	734.8
50°	599.0	680.0	782.7	693.7	666.4
52.5°	554.5	636.7	704.0	629.8	605.9
55°	511.2	587.6	632.1	568.2	546.5
57.5°	467.8	539.7	565.9	510.0	492.9
60°	424.5	489.5	504.3	456.4	438.1
62.5°	382.2	442.7	447.3	405.1	389.1
65°	341.2	390.2	390.2	356.0	342.3
67.5°	297.8	340.0	337.7	305.8	297.8
70°	255.6	291.0	286.4	260.2	251.0
72.5°	215.7	241.9	238.5	217.9	207.7
75°	174.6	196.3	192.8	174.6	170.0
77.5°	135.8	150.6	147.2	134.6	131.2
80°	98.1	109.5	108.4	99.3	93.6
82.5°	66.2	71.9	70.7	65.0	61.6
85°	37.7	41.1	39.9	36.5	35.4
87.5°	14.8	17.1	18.3	17.1	16.0
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	20.63	22.23	20.99	22.55	22.86	20.36	21.96	20.72	22.28	22.59
	3H	22.20	23.65	22.58	23.97	24.33	21.87	23.32	22.25	23.64	24.01
	4H	22.75	24.11	23.15	24.46	24.84	22.41	23.77	22.81	24.11	24.49
	6H	23.12	24.37	23.53	24.74	25.13	22.76	24.02	23.18	24.39	24.78
	8H	23.21	24.42	23.64	24.80	25.20	22.86	24.06	23.28	24.45	24.85
	12H	23.27	24.42	23.70	24.80	25.23	22.91	24.06	23.34	24.44	24.87
4H	2H	21.27	22.63	21.67	22.98	23.35	21.05	22.41	21.45	22.76	23.14
	3H	23.08	24.21	23.49	24.61	25.01	22.77	23.91	23.18	24.30	24.70
	4H	23.76	24.79	24.20	25.20	25.64	23.41	24.43	23.84	24.85	25.28
	6H	24.24	25.14	24.70	25.58	26.04	23.87	24.76	24.32	25.20	25.66
	8H	24.38	25.21	24.84	25.66	26.12	23.99	24.83	24.46	25.27	25.74
	12H	24.46	25.21	24.94	25.69	26.16	24.07	24.82	24.55	25.30	25.77
8H	4H	24.03	24.86	24.49	25.31	25.77	23.72	24.55	24.18	24.99	25.46
	6H	24.62	25.31	25.11	25.80	26.28	24.28	24.97	24.77	25.46	25.93
	8H	24.81	25.43	25.32	25.94	26.43	24.46	25.08	24.97	25.58	26.07
	12H	24.95	25.50	25.46	26.00	26.56	24.58	25.13	25.09	25.63	26.19
12H	4H	24.05	24.79	24.53	25.27	25.74	23.74	24.49	24.22	24.97	25.44
	6H	24.65	25.27	25.16	25.78	26.27	24.32	24.94	24.83	25.45	25.94
	8H	24.89	25.44	25.40	25.94	26.50	24.55	25.10	25.06	25.59	26.15