

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: P1439764

Luminaire Tested: S123DR-H1005D927-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439764  
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-H1005D927-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

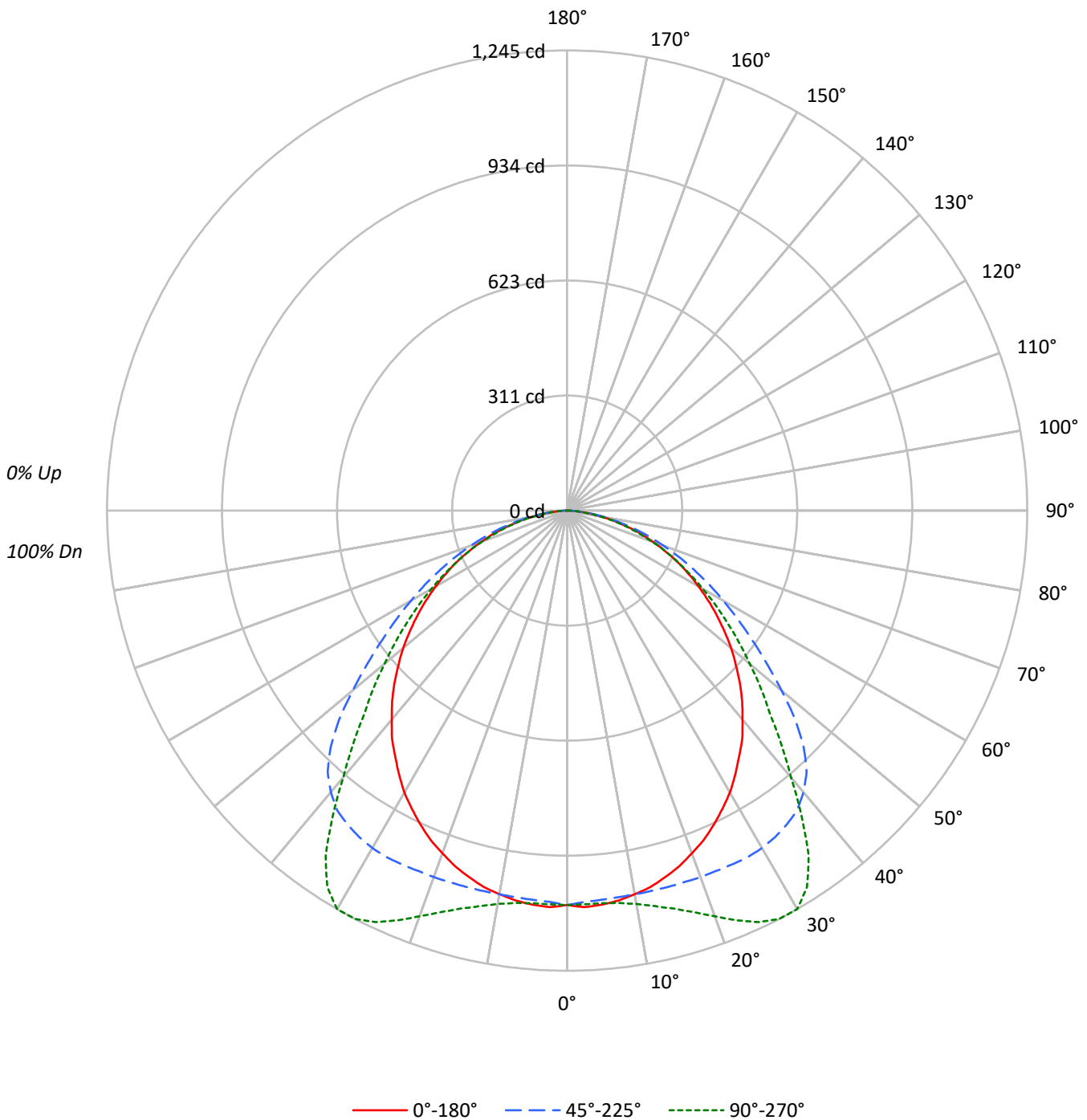
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3228.2 lumens  
Efficiency: N/A  
Efficacy: 88.2 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): 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	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°	12868	12868	12868
5°	12957	12797	12904
10°	12905	12905	13229
15°	12812	13157	13915
20°	12660	13538	14983
25°	12481	14052	16342
30°	12262	14675	17332
35°	11939	15254	16765
40°	11621	15652	14835
45°	11272	15432	13211
50°	10869	14202	12090
55°	10394	12854	11113
60°	9901	11765	10219
65°	9414	10769	9446
70°	8714	9764	8559
75°	7868	8688	7663
80°	6589	7283	6283
85°	5035	5340	4731

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 15432 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.6	3.1
10°-20°	302.0	9.4
20°-30°	494.9	15.3
30°-40°	626.1	19.4
40°-50°	611.7	18.9
50°-60°	502.5	15.6
60°-70°	354.5	11.0
70°-80°	188.9	5.9
80°-90°	46.0	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°	898.5	27.8
0°-40°	1524.6	47.2
0°-60°	2638.8	81.7
0°-90°	3228.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3228.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1067	1067	1067	1067	1067	
5°	1071	1066	1057	1068	1066	102
15°	1026	1032	1054	1102	1115	289
25°	938	966	1056	1184	1228	432
35°	811	868	1036	1157	1139	508
45°	661	736	905	817	775	509
55°	494	568	612	550	529	442
65°	330	378	378	344	331	326
75°	169	190	186	169	164	179
85°	36	40	39	35	34	44
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1067.3	1067.3	1067.3	1067.3	1067.3
2.5°	1073.9	1070.6	1059.6	1069.5	1066.2
5°	1070.6	1066.2	1057.4	1068.4	1066.2
7.5°	1064.0	1061.8	1055.2	1071.7	1070.6
10°	1054.1	1053.0	1054.1	1078.4	1080.6
12.5°	1043.0	1044.1	1054.1	1088.3	1096.0
15°	1026.5	1032.0	1054.1	1101.5	1114.8
17.5°	1008.8	1017.6	1054.1	1119.2	1139.1
20°	986.7	1002.2	1055.2	1138.0	1167.8
22.5°	964.7	983.4	1055.2	1163.3	1199.8
25°	938.2	965.8	1056.3	1184.3	1228.5
27.5°	909.5	942.6	1057.4	1200.9	1245.0
30°	880.8	920.5	1054.1	1207.5	1245.0
32.5°	846.6	895.1	1047.4	1196.5	1207.5
35°	811.2	867.5	1036.4	1156.7	1139.1
37.5°	778.1	837.7	1022.1	1083.9	1041.9
40°	738.4	805.7	994.5	991.2	942.6
42.5°	700.9	771.5	959.1	897.3	857.6
45°	661.1	736.2	905.1	816.8	774.8
47.5°	619.2	697.6	836.6	740.6	710.8
50°	579.5	657.8	757.2	671.1	644.6
52.5°	536.4	615.9	681.0	609.3	586.1
55°	494.5	568.4	611.5	549.7	528.7
57.5°	452.5	522.1	547.5	493.4	476.8
60°	410.6	473.5	487.9	441.5	423.8
62.5°	369.8	428.3	432.7	391.8	376.4
65°	330.0	377.5	377.5	344.4	331.1
67.5°	288.1	328.9	326.7	295.8	288.1
70°	247.2	281.5	277.0	251.7	242.8
72.5°	208.6	234.0	230.7	210.8	200.9
75°	168.9	189.8	186.5	168.9	164.5
77.5°	131.3	145.7	142.4	130.2	126.9
80°	94.9	106.0	104.9	96.0	90.5
82.5°	64.0	69.5	68.4	62.9	59.6
85°	36.4	39.7	38.6	35.3	34.2
87.5°	14.3	16.6	17.7	16.6	15.5
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	20.51	22.12	20.88	22.43	22.75	20.24	21.85	20.61	22.16	22.47
	3H	22.08	23.53	22.46	23.86	24.22	21.76	23.20	22.13	23.53	23.89
	4H	22.64	24.00	23.03	24.34	24.72	22.29	23.65	22.69	24.00	24.38
	6H	23.00	24.26	23.41	24.62	25.01	22.65	23.91	23.06	24.27	24.66
	8H	23.10	24.30	23.52	24.69	25.09	22.74	23.94	23.17	24.33	24.73
	12H	23.15	24.30	23.58	24.69	25.11	22.80	23.95	23.22	24.33	24.76
4H	2H	21.15	22.51	21.55	22.86	23.24	20.94	22.30	21.34	22.65	23.02
	3H	22.96	24.10	23.37	24.49	24.89	22.66	23.79	23.07	24.19	24.59
	4H	23.65	24.67	24.08	25.09	25.52	23.29	24.32	23.72	24.73	25.17
	6H	24.13	25.02	24.58	25.46	25.92	23.75	24.65	24.21	25.09	25.54
	8H	24.26	25.10	24.72	25.54	26.01	23.88	24.71	24.34	25.16	25.62
	12H	24.35	25.10	24.83	25.57	26.04	23.96	24.71	24.44	25.18	25.65
8H	4H	23.91	24.75	24.37	25.19	25.66	23.60	24.44	24.06	24.88	25.34
	6H	24.50	25.20	25.00	25.69	26.16	24.16	24.85	24.65	25.34	25.82
	8H	24.70	25.32	25.21	25.83	26.31	24.34	24.96	24.85	25.47	25.95
	12H	24.84	25.39	25.35	25.88	26.44	24.47	25.02	24.98	25.51	26.07
12H	4H	23.93	24.68	24.41	25.15	25.62	23.63	24.38	24.11	24.85	25.32
	6H	24.54	25.16	25.05	25.67	26.15	24.20	24.83	24.72	25.33	25.82
	8H	24.78	25.33	25.29	25.82	26.38	24.43	24.98	24.94	25.47	26.04