

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: P1055558

Luminaire Tested: S123R3DR-S1000D850-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055558
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S1000D850-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

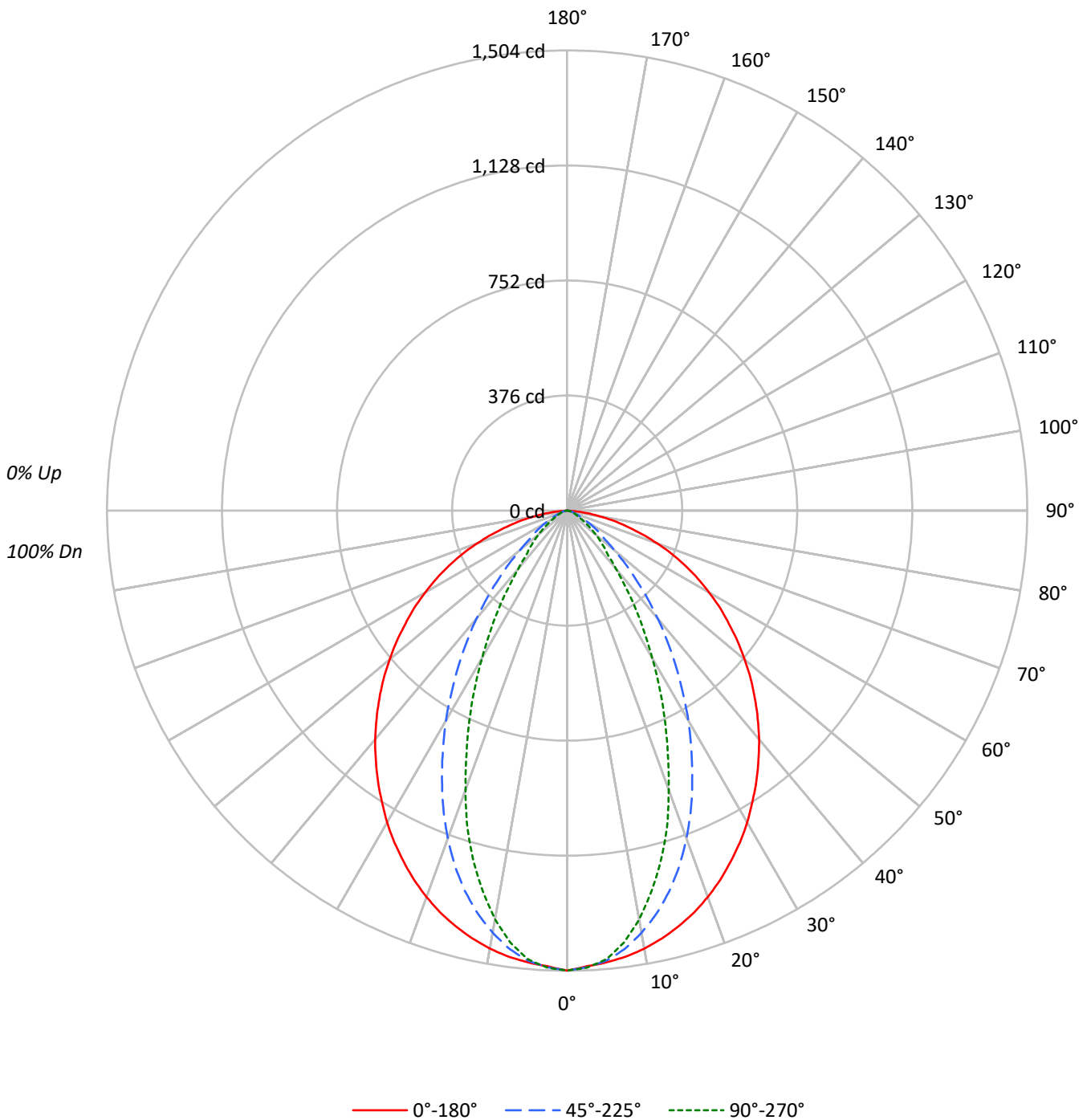
Lumens per Lamp: N/A
Luminaire Lumens: 2090.9 lumens
Efficiency: N/A
Efficacy: 60.3 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79					79			
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70					70			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62					62			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46					46			
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42					42			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39					39			
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36					36			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18127	18127	18127
5°	17937	17868	17817
10°	17796	17150	16609
15°	17557	16080	14782
20°	17242	14628	12452
25°	16835	12873	10048
30°	16388	11031	7738
35°	15878	9103	5727
40°	15364	7244	3903
45°	14798	5419	2939
50°	14193	3768	2300
55°	13570	2756	1677
60°	12922	2062	1203
65°	12156	1384	936
70°	11002	1005	754
75°	9493	731	596
80°	7616	597	493
85°	3942	595	401

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14798 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.0	6.6
10°-20°	361.8	17.3
20°-30°	454.5	21.7
30°-40°	423.3	20.2
40°-50°	324.1	15.5
50°-60°	215.4	10.3
60°-70°	116.1	5.6
70°-80°	47.6	2.3
80°-90°	9.1	0.4
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°	955.3	45.7
0°-40°	1378.6	65.9
0°-60°	1918.1	91.7
0°-90°	2090.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2090.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1504	1504	1504	1504	1504	
5°	1482	1498	1476	1471	1472	141
15°	1407	1384	1288	1213	1184	396
25°	1266	1180	968	807	755	583
35°	1079	919	618	438	389	674
45°	868	641	318	187	172	670
55°	646	373	131	91	80	578
65°	426	144	48	36	33	421
75°	204	34	16	14	13	218
85°	28	4	4	4	3	42
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1503.5	1503.5	1503.5	1503.5	1503.5
2.5°	1490.7	1509.2	1493.5	1495.0	1495.0
5°	1482.1	1497.8	1476.4	1470.7	1472.2
7.5°	1470.7	1480.7	1445.1	1426.6	1423.7
10°	1453.6	1456.5	1400.9	1368.1	1356.7
12.5°	1432.3	1422.3	1349.6	1295.4	1274.1
15°	1406.6	1383.8	1288.3	1212.8	1184.3
17.5°	1378.1	1339.6	1218.5	1120.2	1086.0
20°	1343.9	1289.7	1140.1	1017.5	970.5
22.5°	1306.8	1237.0	1057.4	912.1	859.4
25°	1265.5	1180.0	967.7	806.6	755.3
27.5°	1222.8	1118.7	879.3	706.9	654.1
30°	1177.2	1056.0	792.4	610.0	555.8
32.5°	1127.3	987.6	702.6	520.2	466.0
35°	1078.8	919.2	618.5	437.5	389.1
37.5°	1027.5	850.8	537.3	364.8	310.7
40°	976.2	781.0	460.3	293.6	248.0
42.5°	922.1	711.1	387.6	233.7	198.1
45°	867.9	641.3	317.8	186.7	172.4
47.5°	813.8	571.5	256.5	161.0	146.8
50°	756.7	504.5	200.9	136.8	122.6
52.5°	702.6	437.5	156.8	112.6	99.8
55°	645.6	373.4	131.1	91.2	79.8
57.5°	592.9	307.8	108.3	71.3	62.7
60°	535.9	249.4	85.5	55.6	49.9
62.5°	481.7	195.2	65.6	44.2	39.9
65°	426.1	143.9	48.5	35.6	32.8
67.5°	370.5	104.0	37.1	28.5	27.1
70°	312.1	78.4	28.5	22.8	21.4
72.5°	256.5	55.6	21.4	18.5	17.1
75°	203.8	34.2	15.7	14.3	12.8
77.5°	156.8	20.0	11.4	11.4	10.0
80°	109.7	11.4	8.6	8.6	7.1
82.5°	67.0	7.1	5.7	5.7	5.7
85°	28.5	4.3	4.3	4.3	2.9
87.5°	4.3	1.4	1.4	1.4	1.4
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	19.88	21.24	20.24	21.55	21.86	8.46	9.81	8.82	10.13	10.44
	3H	21.63	22.84	22.01	23.17	23.53	9.12	10.32	9.50	10.65	11.02
	4H	22.33	23.46	22.73	23.81	24.19	9.32	10.44	9.72	10.79	11.17
	6H	22.85	23.88	23.26	24.25	24.64	9.44	10.47	9.85	10.84	11.23
	8H	22.99	23.96	23.42	24.36	24.76	9.47	10.45	9.90	10.84	11.25
	12H	23.04	23.97	23.47	24.36	24.79	9.48	10.42	9.91	10.80	11.23
4H	2H	19.69	20.81	20.09	21.16	21.54	9.01	10.14	9.42	10.49	10.87
	3H	21.48	22.40	21.89	22.80	23.21	9.81	10.73	10.22	11.14	11.54
	4H	22.17	23.00	22.61	23.42	23.86	10.07	10.89	10.50	11.31	11.75
	6H	22.75	23.46	23.21	23.90	24.37	10.27	10.98	10.73	11.42	11.89
	8H	22.92	23.58	23.39	24.03	24.50	10.32	10.98	10.79	11.43	11.90
	12H	23.01	23.59	23.49	24.08	24.55	10.35	10.94	10.84	11.42	11.90
8H	4H	22.05	22.71	22.52	23.16	23.63	10.38	11.05	10.85	11.49	11.96
	6H	22.61	23.15	23.11	23.64	24.12	10.63	11.17	11.13	11.67	12.15
	8H	22.78	23.27	23.30	23.78	24.27	10.72	11.21	11.24	11.72	12.21
	12H	22.89	23.31	23.40	23.81	24.38	10.80	11.23	11.32	11.72	12.30
12H	4H	22.01	22.59	22.49	23.08	23.55	10.43	11.01	10.91	11.50	11.97
	6H	22.55	23.03	23.07	23.55	24.04	10.68	11.16	11.20	11.68	12.17
	8H	22.74	23.17	23.26	23.67	24.24	10.80	11.23	11.32	11.73	12.30