

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: P1055559

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055559
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
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-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

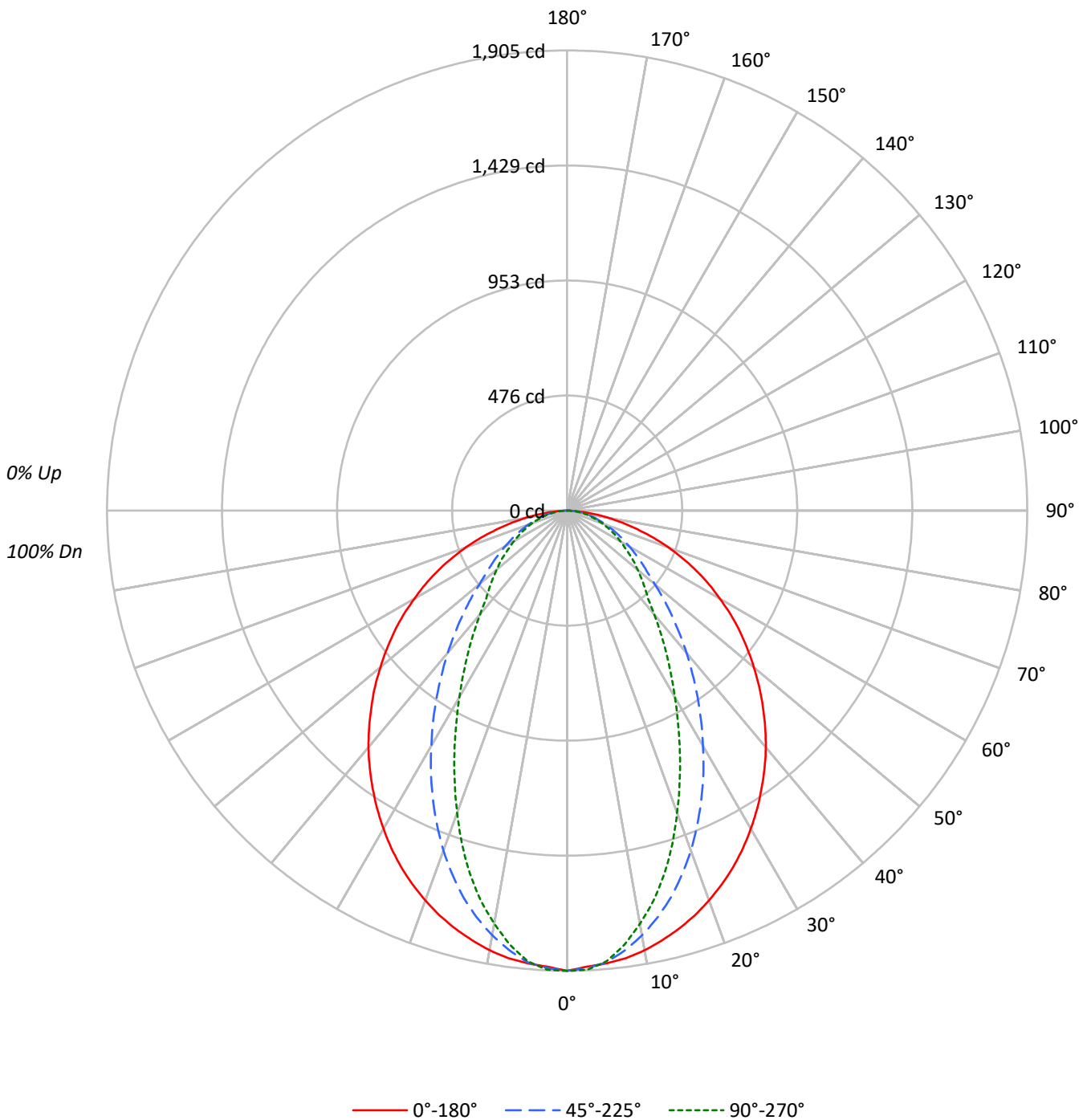
Lumens per Lamp: N/A
Luminaire Lumens: 3341.8 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
Input Voltage (V): 120
Input Current (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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22972	22972	22972
5°	22767	22715	22663
10°	22629	21861	21267
15°	22360	20706	19424
20°	22033	19217	17078
25°	21650	17498	14693
30°	21169	15653	12419
35°	20661	13844	10488
40°	20142	12089	8815
45°	19536	10425	7775
50°	18925	8874	7137
55°	18363	7908	6590
60°	17595	7147	6151
65°	16871	6544	5774
70°	15725	6028	5425
75°	14073	5576	5110
80°	12074	5145	4749
85°	8480	4731	4537

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19536 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.6	5.3
10°-20°	467.3	14.0
20°-30°	615.6	18.4
30°-40°	624.8	18.7
40°-50°	543.1	16.3
50°-60°	425.5	12.7
60°-70°	289.1	8.7
70°-80°	156.7	4.7
80°-90°	43.1	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°	1259.5	37.7
0°-40°	1884.3	56.4
0°-60°	2852.9	85.4
0°-90°	3341.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3341.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1905	1905	1905	1905	1905	
5°	1881	1904	1877	1860	1873	179
15°	1791	1766	1659	1578	1556	505
25°	1628	1529	1315	1152	1104	749
35°	1404	1237	941	761	713	878
45°	1146	919	611	472	456	884
55°	874	607	376	321	314	780
65°	591	328	229	205	202	584
75°	302	151	120	111	110	323
85°	61	37	34	31	33	77
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1905.4	1905.4	1905.4	1905.4	1905.4
2.5°	1889.7	1914.0	1895.4	1896.9	1902.6
5°	1881.2	1904.0	1876.9	1859.8	1872.6
7.5°	1868.4	1885.5	1835.6	1808.5	1812.8
10°	1848.4	1854.1	1785.7	1742.9	1737.2
12.5°	1821.3	1811.3	1725.8	1663.1	1653.2
15°	1791.4	1765.7	1658.9	1577.6	1556.2
17.5°	1757.2	1714.4	1580.5	1480.7	1447.9
20°	1717.3	1657.4	1497.8	1371.0	1331.1
22.5°	1674.5	1597.6	1408.0	1258.4	1217.1
25°	1627.5	1529.2	1315.4	1151.5	1104.5
27.5°	1576.2	1460.8	1221.3	1046.0	993.3
30°	1520.6	1389.5	1124.4	943.4	892.1
32.5°	1463.6	1314.0	1031.8	848.0	798.1
35°	1403.8	1237.0	940.6	761.0	712.6
37.5°	1342.5	1158.6	852.2	678.4	632.8
40°	1279.8	1078.8	768.1	601.4	560.1
42.5°	1212.8	999.0	686.9	528.7	497.4
45°	1145.8	919.2	611.4	471.7	456.0
47.5°	1078.8	838.0	540.1	431.8	417.6
50°	1009.0	759.6	473.1	394.8	380.5
52.5°	940.6	682.6	417.6	359.1	349.2
55°	873.6	607.1	376.2	320.7	313.5
57.5°	803.8	533.0	334.9	290.7	282.2
60°	729.7	461.7	296.4	259.4	255.1
62.5°	662.7	394.8	262.2	232.3	228.0
65°	591.4	327.8	229.4	205.2	202.4
67.5°	518.7	272.2	199.5	179.6	178.1
70°	446.1	229.4	171.0	155.3	153.9
72.5°	374.8	189.5	143.9	134.0	131.1
75°	302.1	151.1	119.7	111.2	109.7
77.5°	236.6	116.9	95.5	89.8	88.4
80°	173.9	86.9	74.1	69.8	68.4
82.5°	114.0	59.9	52.7	49.9	49.9
85°	61.3	37.1	34.2	31.4	32.8
87.5°	21.4	15.7	15.7	14.3	15.7
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	21.45	22.94	21.81	23.25	23.57	16.60	18.09	16.96	18.40	18.72
	3H	23.33	24.67	23.71	25.00	25.36	18.22	19.56	18.60	19.89	20.25
	4H	24.09	25.35	24.49	25.70	26.07	18.86	20.12	19.26	20.47	20.84
	6H	24.66	25.82	25.07	26.18	26.57	19.35	20.51	19.76	20.88	21.27
	8H	24.83	25.93	25.26	26.32	26.72	19.52	20.63	19.95	21.02	21.42
	12H	24.93	25.98	25.36	26.36	26.79	19.65	20.70	20.08	21.08	21.51
4H	2H	21.49	22.75	21.89	23.10	23.48	17.32	18.58	17.72	18.93	19.31
	3H	23.51	24.55	23.92	24.95	25.36	19.15	20.19	19.56	20.59	20.99
	4H	24.33	25.27	24.76	25.68	26.12	19.89	20.83	20.32	21.25	21.69
	6H	25.01	25.83	25.47	26.27	26.73	20.50	21.32	20.96	21.76	22.22
	8H	25.24	26.01	25.71	26.45	26.92	20.72	21.48	21.18	21.92	22.39
	12H	25.39	26.08	25.88	26.55	27.03	20.88	21.57	21.37	22.04	22.52
8H	4H	24.35	25.12	24.82	25.56	26.03	20.28	21.04	20.74	21.48	21.95
	6H	25.08	25.71	25.58	26.20	26.68	21.00	21.63	21.50	22.13	22.60
	8H	25.35	25.92	25.87	26.43	26.92	21.29	21.86	21.81	22.37	22.86
	12H	25.56	26.06	26.07	26.55	27.12	21.54	22.04	22.05	22.53	23.09
12H	4H	24.34	25.02	24.82	25.50	25.97	20.33	21.01	20.81	21.49	21.96
	6H	25.07	25.63	25.58	26.14	26.63	21.09	21.65	21.60	22.16	22.65
	8H	25.37	25.87	25.88	26.36	26.93	21.43	21.93	21.94	22.43	22.99