

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059444

Luminaire Tested: S123RDR-H1000D850-X4F0-XX-UDD-WVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059444
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-64)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1000D850-X4F0-XX-UDD-WVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

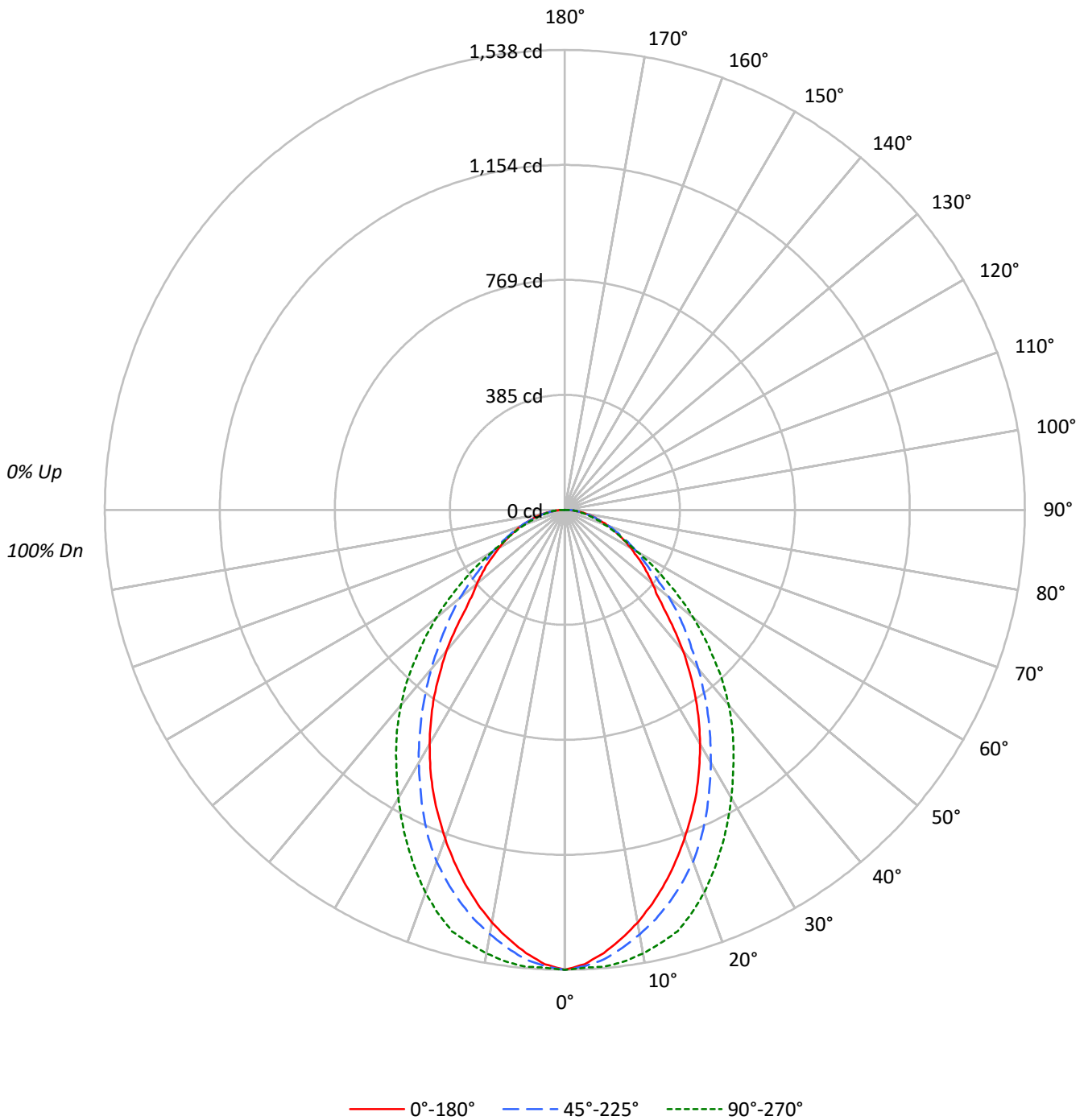
Lumens per Lamp: N/A
Luminaire Lumens: 2702.7 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Spacing Criteria (0/90/45): 0.94 / 1.1 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
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	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				
3	94	85	77	72	92	83	76	71	80	75	70	78	73	69	75	71	68	66				
4	87	76	69	63	85	75	68	62	73	66	61	70	65	61	68	64	60	58				
5	81	69	61	55	79	68	61	55	66	59	54	64	58	54	62	57	53	51				
6	75	63	55	49	73	62	55	49	61	54	49	59	53	48	57	52	48	46				
7	70	58	50	44	69	57	50	44	56	49	44	54	48	44	53	48	43	41				
8	66	53	46	40	64	53	45	40	51	45	40	50	44	40	49	44	39	38				
9	62	49	42	37	60	49	42	37	48	41	36	47	41	36	46	40	36	34				
10	58	46	39	34	57	45	38	34	45	38	34	44	38	33	43	37	33	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	18061	18061	18061
5°	17537	17786	18068
10°	16713	17187	17960
15°	15721	16493	17732
20°	14622	15648	17020
25°	13497	14509	16087
30°	12257	13244	15094
35°	10910	11954	14098
40°	9415	10652	13066
45°	7782	9429	11716
50°	6988	8317	10228
55°	6475	7100	8482
60°	5968	6465	6496
65°	5554	5849	5443
70°	5225	5318	4772
75°	4923	4746	4206
80°	4652	4294	3936
85°	4460	4810	4460

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 11716 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	142.5	5.3
10°-20°	383.8	14.2
20°-30°	519.2	19.2
30°-40°	533.5	19.7
40°-50°	448.1	16.6
50°-60°	321.2	11.9
60°-70°	204.5	7.6
70°-80°	112.4	4.2
80°-90°	37.5	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°	1045.4	38.7
0°-40°	1578.9	58.4
0°-60°	2348.3	86.9
0°-90°	2702.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2702.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1538	1538	1538	1538	1538	
5°	1488	1514	1509	1520	1533	139
15°	1293	1329	1357	1415	1459	362
25°	1042	1081	1120	1181	1242	477
35°	761	802	834	908	984	474
45°	469	510	568	650	706	370
55°	316	323	347	393	414	283
65°	200	212	210	198	196	199
75°	108	119	105	97	93	115
85°	33	34	36	37	33	36
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1538.1	1538.1	1538.1	1538.1	1538.1
2.5°	1520.9	1542.0	1527.5	1528.8	1532.8
5°	1487.8	1514.2	1508.9	1519.5	1532.8
7.5°	1446.7	1475.9	1477.2	1502.3	1523.5
10°	1401.7	1432.2	1441.4	1479.8	1506.3
12.5°	1348.8	1381.9	1401.7	1449.4	1483.8
15°	1293.2	1328.9	1356.7	1415.0	1458.6
17.5°	1232.3	1270.7	1306.4	1368.6	1413.6
20°	1170.1	1211.1	1252.2	1310.4	1362.0
22.5°	1105.2	1147.6	1189.9	1246.9	1303.8
25°	1041.7	1081.4	1119.8	1180.7	1241.6
27.5°	972.9	1013.9	1047.0	1114.5	1178.0
30°	904.0	945.1	976.8	1047.0	1113.2
32.5°	832.6	874.9	904.0	976.8	1045.7
35°	761.1	802.1	833.9	908.0	983.5
37.5°	685.6	730.6	762.4	845.8	919.9
40°	614.2	656.5	694.9	782.3	852.4
42.5°	540.0	583.7	627.4	717.4	782.3
45°	468.6	509.6	567.8	649.9	705.5
47.5°	416.9	443.4	510.9	579.8	632.7
50°	382.5	393.1	455.3	516.2	559.9
52.5°	348.1	356.1	398.4	454.0	487.1
55°	316.3	323.0	346.8	393.1	414.3
57.5°	281.9	288.6	308.4	334.9	346.8
60°	254.1	259.4	275.3	279.3	276.6
62.5°	226.3	234.3	242.2	233.0	229.0
65°	199.9	211.8	210.5	198.5	195.9
67.5°	176.0	188.0	181.3	169.4	165.5
70°	152.2	164.1	154.9	143.0	139.0
72.5°	129.7	143.0	128.4	117.8	115.2
75°	108.5	119.1	104.6	96.6	92.7
77.5°	88.7	96.6	83.4	76.8	74.1
80°	68.8	74.1	63.5	59.6	58.2
82.5°	50.3	52.9	46.3	49.0	47.7
85°	33.1	34.4	35.7	37.1	33.1
87.5°	15.9	22.5	22.5	21.2	17.2
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	17.24	18.70	17.60	19.02	19.33	18.31	19.77	18.67	20.08	20.40
	3H	18.94	20.25	19.31	20.58	20.94	19.39	20.70	19.77	21.03	21.40
	4H	19.59	20.82	19.99	21.17	21.55	19.79	21.02	20.20	21.37	21.75
	6H	20.09	21.23	20.51	21.59	21.99	20.10	21.24	20.52	21.61	22.00
	8H	20.27	21.34	20.69	21.73	22.14	20.24	21.32	20.67	21.71	22.11
	12H	20.39	21.42	20.82	21.81	22.23	20.36	21.39	20.79	21.77	22.20
4H	2H	17.84	19.07	18.24	19.42	19.80	18.71	19.94	19.11	20.29	20.67
	3H	19.77	20.79	20.18	21.19	21.59	20.03	21.05	20.44	21.45	21.85
	4H	20.58	21.50	21.01	21.91	22.35	20.55	21.47	20.98	21.88	22.32
	6H	21.23	22.02	21.69	22.47	22.93	20.98	21.78	21.44	22.22	22.68
	8H	21.45	22.19	21.91	22.64	23.11	21.17	21.92	21.64	22.36	22.83
	12H	21.62	22.29	22.10	22.77	23.24	21.36	22.02	21.84	22.50	22.97
8H	4H	20.82	21.56	21.28	22.01	22.47	20.79	21.54	21.26	21.98	22.45
	6H	21.60	22.22	22.10	22.71	23.19	21.34	21.96	21.84	22.45	22.93
	8H	21.92	22.47	22.43	22.98	23.47	21.62	22.17	22.14	22.68	23.17
	12H	22.19	22.67	22.70	23.17	23.73	21.91	22.40	22.42	22.89	23.46
12H	4H	20.83	21.49	21.31	21.97	22.44	20.82	21.49	21.30	21.96	22.44
	6H	21.64	22.19	22.15	22.70	23.19	21.39	21.95	21.91	22.46	22.95
	8H	22.01	22.50	22.52	23.00	23.56	21.74	22.23	22.25	22.72	23.28