

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: P1055154

Luminaire Tested: S122R3DR-S1005D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055154
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S1005D850-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

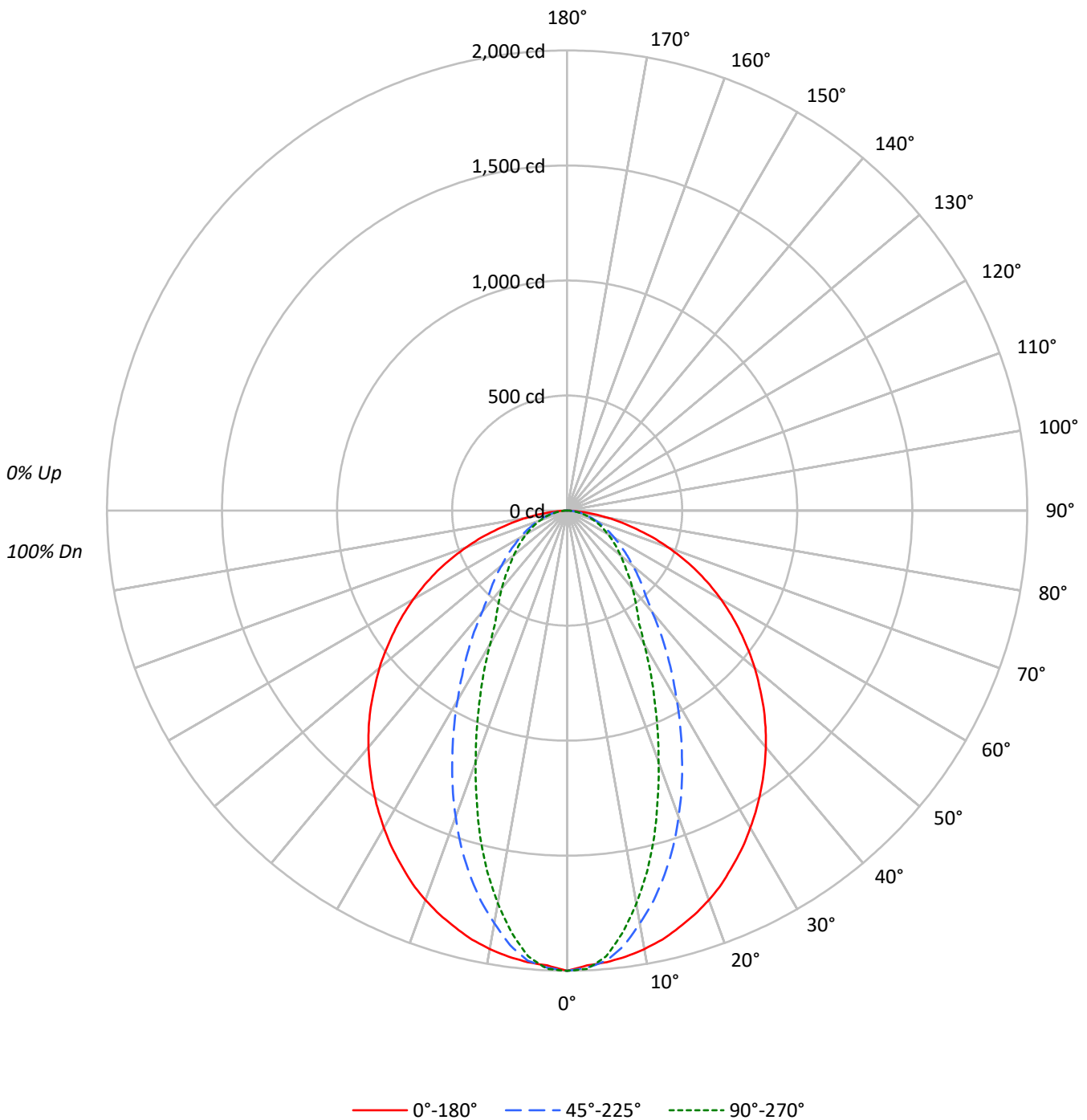
Lumens per Lamp: N/A
Luminaire Lumens: 3025.7 lumens
Efficiency: N/A
Efficacy: 72.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1055154

CATALOG NUMBER: S122R3DR-S1005D850-X4F0-XX-UDD-F-W

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	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	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	37899	37899	37899
5°	37472	37344	36994
10°	37228	35040	33367
15°	36808	32116	28705
20°	36317	28561	23436
25°	35592	24684	18705
30°	34834	20855	14598
35°	34041	17446	12263
40°	33218	14147	10922
45°	32356	12368	9769
50°	31402	10944	8922
55°	30329	9890	8287
60°	29279	8999	7734
65°	27893	8249	7271
70°	25847	7689	6858
75°	22897	6976	6486
80°	19530	6568	6023
85°	13456	5826	5456

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 32356 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	183.3	6.1
10°-20°	462.8	15.3
20°-30°	570.3	18.8
30°-40°	547.1	18.1
40°-50°	471.9	15.6
50°-60°	366.1	12.1
60°-70°	250.7	8.3
70°-80°	136.1	4.5
80°-90°	37.3	1.2
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°	1216.4	40.2
0°-40°	1763.5	58.3
0°-60°	2601.6	86.0
0°-90°	3025.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3025.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2000	2000	2000	2000	2000	
5°	1970	1999	1964	1938	1945	187
15°	1877	1820	1637	1504	1464	529
25°	1703	1520	1181	963	895	785
35°	1472	1167	754	562	530	921
45°	1208	813	462	381	365	931
55°	918	488	299	259	251	822
65°	622	266	184	167	162	614
75°	313	122	95	90	89	335
85°	62	30	27	27	25	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2000.4	2000.4	2000.4	2000.4	2000.4
2.5°	1978.6	2012.1	1988.7	1988.7	1993.7
5°	1970.3	1998.7	1963.6	1938.5	1945.2
7.5°	1955.2	1975.3	1905.0	1851.5	1849.8
10°	1935.1	1936.8	1821.4	1751.2	1734.4
12.5°	1910.0	1883.3	1736.1	1630.7	1605.6
15°	1876.6	1819.7	1637.4	1503.6	1463.5
17.5°	1841.5	1754.5	1532.0	1364.8	1309.6
20°	1801.3	1675.9	1416.6	1226.0	1162.4
22.5°	1756.2	1600.6	1301.2	1092.2	1025.3
25°	1702.6	1520.3	1180.8	963.4	894.8
27.5°	1650.8	1438.4	1065.4	849.7	779.4
30°	1592.3	1349.7	953.3	740.9	667.3
32.5°	1533.7	1259.4	849.7	637.2	582.0
35°	1471.8	1167.4	754.3	562.0	530.2
37.5°	1408.3	1077.1	664.0	511.8	483.4
40°	1343.1	986.8	572.0	463.3	441.6
42.5°	1276.1	898.2	508.5	423.2	403.1
45°	1207.6	812.9	461.6	381.3	364.6
47.5°	1134.0	727.6	416.5	346.2	331.2
50°	1065.4	645.6	371.3	314.4	302.7
52.5°	991.8	565.3	334.5	286.0	276.0
55°	918.2	488.4	299.4	259.2	250.9
57.5°	846.3	414.8	265.9	234.2	227.5
60°	772.7	356.3	237.5	210.7	204.1
62.5°	697.5	309.4	210.7	189.0	182.3
65°	622.2	265.9	184.0	167.3	162.2
67.5°	543.6	224.1	160.6	147.2	143.8
70°	466.6	187.3	138.8	127.1	123.8
72.5°	391.4	152.2	117.1	108.7	105.4
75°	312.8	122.1	95.3	90.3	88.6
77.5°	244.2	95.3	76.9	73.6	71.9
80°	179.0	70.2	60.2	56.9	55.2
82.5°	118.8	48.5	43.5	41.8	40.1
85°	61.9	30.1	26.8	26.8	25.1
87.5°	20.1	13.4	13.4	13.4	11.7
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	22.24	23.71	22.60	24.02	24.33	17.04	18.51	17.41	18.83	19.14
	3H	24.57	25.88	24.95	26.21	26.57	18.69	20.01	19.07	20.34	20.70
	4H	25.46	26.70	25.86	27.05	27.43	19.33	20.56	19.73	20.91	21.29
	6H	26.13	27.27	26.54	27.63	28.03	19.82	20.96	20.23	21.33	21.72
	8H	26.33	27.42	26.76	27.81	28.21	19.99	21.07	20.42	21.46	21.87
	12H	26.45	27.49	26.88	27.87	28.30	20.11	21.14	20.54	21.53	21.96
4H	2H	22.25	23.49	22.65	23.84	24.22	17.76	18.99	18.16	19.34	19.72
	3H	24.67	25.69	25.08	26.09	26.49	19.61	20.63	20.02	21.03	21.43
	4H	25.60	26.52	26.03	26.94	27.37	20.35	21.28	20.79	21.69	22.13
	6H	26.37	27.18	26.83	27.62	28.08	20.97	21.77	21.43	22.21	22.68
	8H	26.64	27.39	27.11	27.84	28.31	21.19	21.93	21.65	22.38	22.85
	12H	26.82	27.49	27.30	27.97	28.44	21.35	22.01	21.83	22.49	22.97
8H	4H	25.59	26.34	26.05	26.78	27.25	20.73	21.48	21.20	21.93	22.39
	6H	26.40	27.01	26.89	27.51	27.98	21.47	22.09	21.97	22.58	23.06
	8H	26.70	27.25	27.21	27.76	28.25	21.77	22.32	22.28	22.83	23.32
	12H	26.93	27.42	27.44	27.91	28.48	22.01	22.50	22.52	22.99	23.56
12H	4H	25.57	26.24	26.05	26.72	27.19	20.79	21.46	21.27	21.94	22.41
	6H	26.37	26.93	26.89	27.44	27.93	21.56	22.11	22.07	22.62	23.11
	8H	26.71	27.20	27.22	27.69	28.25	21.91	22.40	22.42	22.89	23.46