

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: P1055164

Luminaire Tested: S122R3DR-S1005D940-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055164
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-S1005D940-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

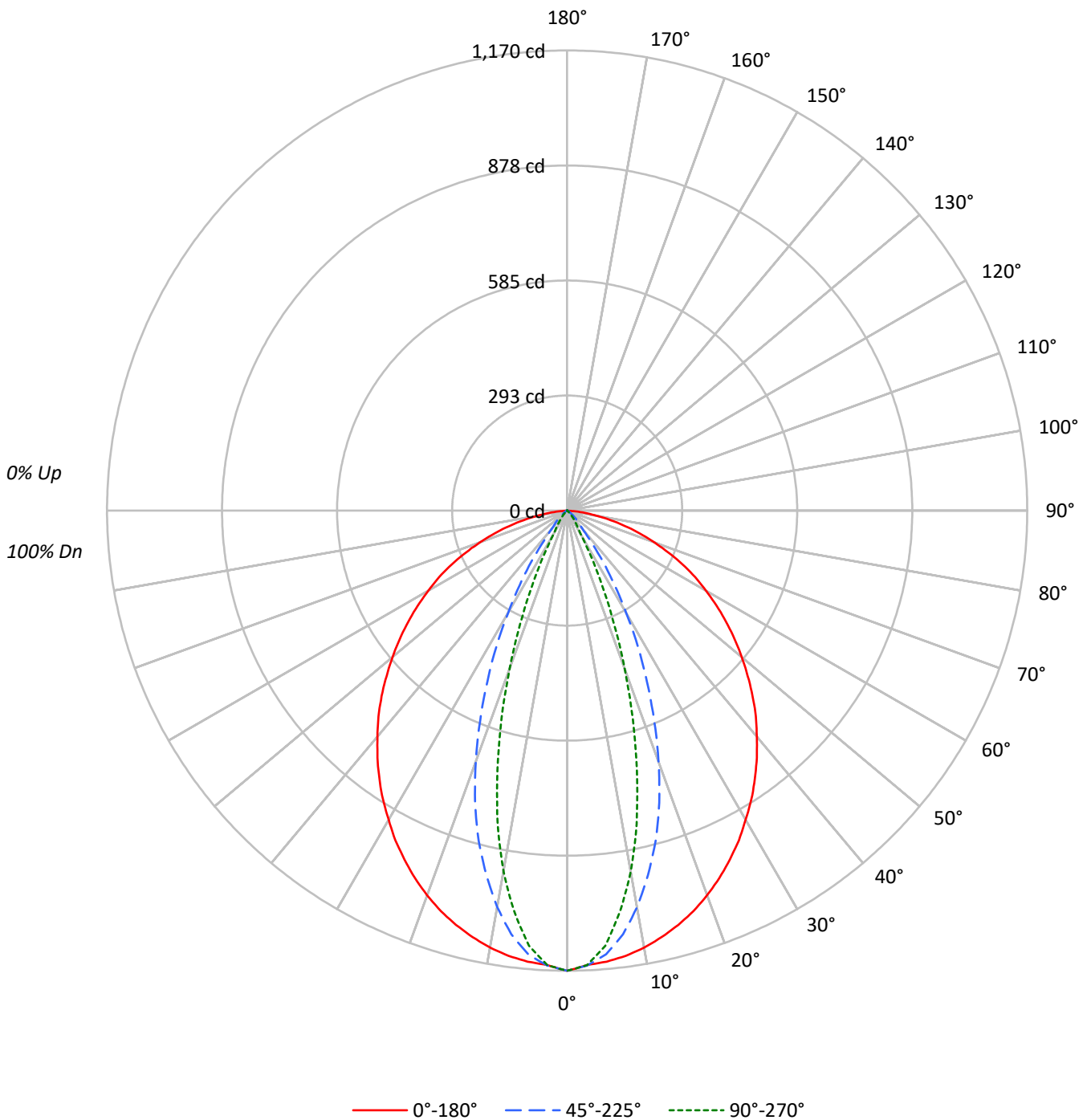
Lumens per Lamp: N/A
Luminaire Lumens: 1064.4 lumens
Efficiency: N/A
Efficacy: 25.4 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (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

TEST NUMBER: P1055164

CATALOG NUMBER: S122R3DR-S1005D940-X4F0-XX-UDD-F-B

Luminous Intensity Polar Plot





TEST NUMBER: P1055164

CATALOG NUMBER: S122R3DR-S1005D940-X4F0-XX-UDD-F-B

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	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	56
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	48	44	43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22167	22167	22167
5°	21894	21536	21125
10°	21706	19688	17930
15°	21393	17041	13426
20°	20986	13692	8595
25°	20465	10036	4413
30°	19860	6561	1442
35°	19255	3638	840
40°	18559	1464	465
45°	17871	973	180
50°	17083	554	80
55°	16304	268	43
60°	15441	102	0
65°	14529	58	0
70°	13034	72	0
75°	11222	95	0
80°	8510	0	0
85°	3500	283	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17871 cd/sqm



TEST NUMBER: P1055164

CATALOG NUMBER: S122R3DR-S1005D940-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	104.9	9.9
10°-20°	243.7	22.9
20°-30°	247.4	23.2
30°-40°	185.7	17.4
40°-50°	130.0	12.2
50°-60°	79.6	7.5
60°-70°	47.4	4.5
70°-80°	21.8	2.1
80°-90°	3.9	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°	596.0	56.0
0°-40°	781.7	73.4
0°-60°	991.3	93.1
0°-90°	1064.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1064.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1170	1170	1170	1170	1170	
5°	1151	1162	1132	1111	1111	109
15°	1091	1032	869	736	684	307
25°	979	807	480	274	211	451
35°	832	542	157	47	36	520
45°	667	286	36	11	7	514
55°	494	87	8	3	1	441
65°	324	26	1	1	0	319
75°	153	3	1	1	0	163
85°	16	0	1	1	0	27
90°	0	0	0	0	0	



TEST NUMBER: P1055164

CATALOG NUMBER: S122R3DR-S1005D940-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1170.0	1170.0	1170.0	1170.0	1170.0
2.5°	1156.6	1174.0	1157.9	1155.2	1156.6
5°	1151.2	1161.9	1132.4	1110.8	1110.8
7.5°	1141.8	1141.8	1086.6	1042.3	1028.8
10°	1128.3	1113.5	1023.4	952.1	932.0
12.5°	1110.8	1075.9	949.5	848.6	816.3
15°	1090.7	1031.5	868.8	735.6	684.5
17.5°	1067.8	981.7	778.7	613.2	554.1
20°	1040.9	927.9	679.1	488.2	426.3
22.5°	1011.3	868.8	578.3	376.6	310.7
25°	979.0	806.9	480.1	274.3	211.1
27.5°	945.4	742.4	390.0	188.3	129.1
30°	907.8	675.1	299.9	111.6	65.9
32.5°	871.5	610.6	224.6	60.5	48.4
35°	832.5	542.0	157.3	47.1	36.3
37.5°	792.1	477.4	96.8	35.0	26.9
40°	750.4	411.5	59.2	25.6	18.8
42.5°	710.1	349.7	47.1	17.5	12.1
45°	667.0	286.5	36.3	10.8	6.7
47.5°	622.7	228.6	26.9	6.7	4.0
50°	579.6	177.5	18.8	4.0	2.7
52.5°	536.6	130.4	12.1	2.7	1.3
55°	493.6	87.4	8.1	2.7	1.3
57.5°	450.5	61.9	5.4	1.3	1.3
60°	407.5	48.4	2.7	1.3	0.0
62.5°	367.1	37.7	2.7	1.3	1.3
65°	324.1	25.6	1.3	1.3	0.0
67.5°	278.4	16.1	1.3	1.3	0.0
70°	235.3	9.4	1.3	1.3	0.0
72.5°	193.7	5.4	1.3	1.3	0.0
75°	153.3	2.7	1.3	1.3	0.0
77.5°	114.3	1.3	0.0	1.3	0.0
80°	78.0	0.0	0.0	1.3	0.0
82.5°	45.7	0.0	0.0	1.3	0.0
85°	16.1	0.0	1.3	1.3	0.0
87.5°	0.0	0.0	1.3	1.3	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055164
 CATALOG NUMBER: S122R3DR-S1005D940-X4F0-XX-UDD-F-B

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	16.98	18.24	17.34	18.55	18.87	0.00	0.00	0.00	0.00	0.00
	3H	20.72	21.84	21.10	22.17	22.53	0.00	0.00	0.00	0.00	0.00
	4H	22.03	23.07	22.43	23.42	23.81	0.00	0.00	0.00	0.00	0.00
	6H	22.88	23.84	23.30	24.21	24.61	0.00	0.00	0.00	0.00	0.00
	8H	23.10	24.00	23.53	24.39	24.80	0.00	0.00	0.00	0.00	0.00
	12H	23.16	24.02	23.59	24.41	24.84	0.00	0.00	0.00	0.00	0.00
4H	2H	16.73	17.77	17.14	18.12	18.51	0.00	0.00	0.00	0.00	0.00
	3H	20.47	21.33	20.89	21.73	22.13	0.00	0.00	0.00	0.00	0.00
	4H	21.77	22.53	22.20	22.95	23.39	0.00	0.00	0.00	0.00	0.00
	6H	22.69	23.34	23.15	23.79	24.26	0.00	0.00	0.00	0.00	0.00
	8H	22.95	23.56	23.42	24.00	24.48	0.00	0.00	0.00	0.00	0.00
	12H	23.05	23.58	23.53	24.07	24.54	0.00	0.00	0.00	0.00	0.00
8H	4H	21.62	22.24	22.09	22.68	23.15	0.00	0.00	0.00	0.00	0.00
	6H	22.52	23.02	23.03	23.52	24.00	0.00	0.00	0.00	0.00	0.00
	8H	22.78	23.23	23.31	23.74	24.24	0.00	0.00	0.00	0.00	0.00
	12H	22.90	23.29	23.42	23.78	24.36	0.00	0.00	0.00	0.00	0.00
12H	4H	21.57	22.11	22.06	22.60	23.07	0.00	0.00	0.00	0.00	0.00
	6H	22.46	22.91	22.98	23.42	23.91	0.00	0.00	0.00	0.00	0.00
	8H	22.74	23.13	23.25	23.62	24.20	0.00	0.00	0.00	0.00	0.00