

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: P1055218

Luminaire Tested: S122R3DR-S485D940-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055218
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-S485D940-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

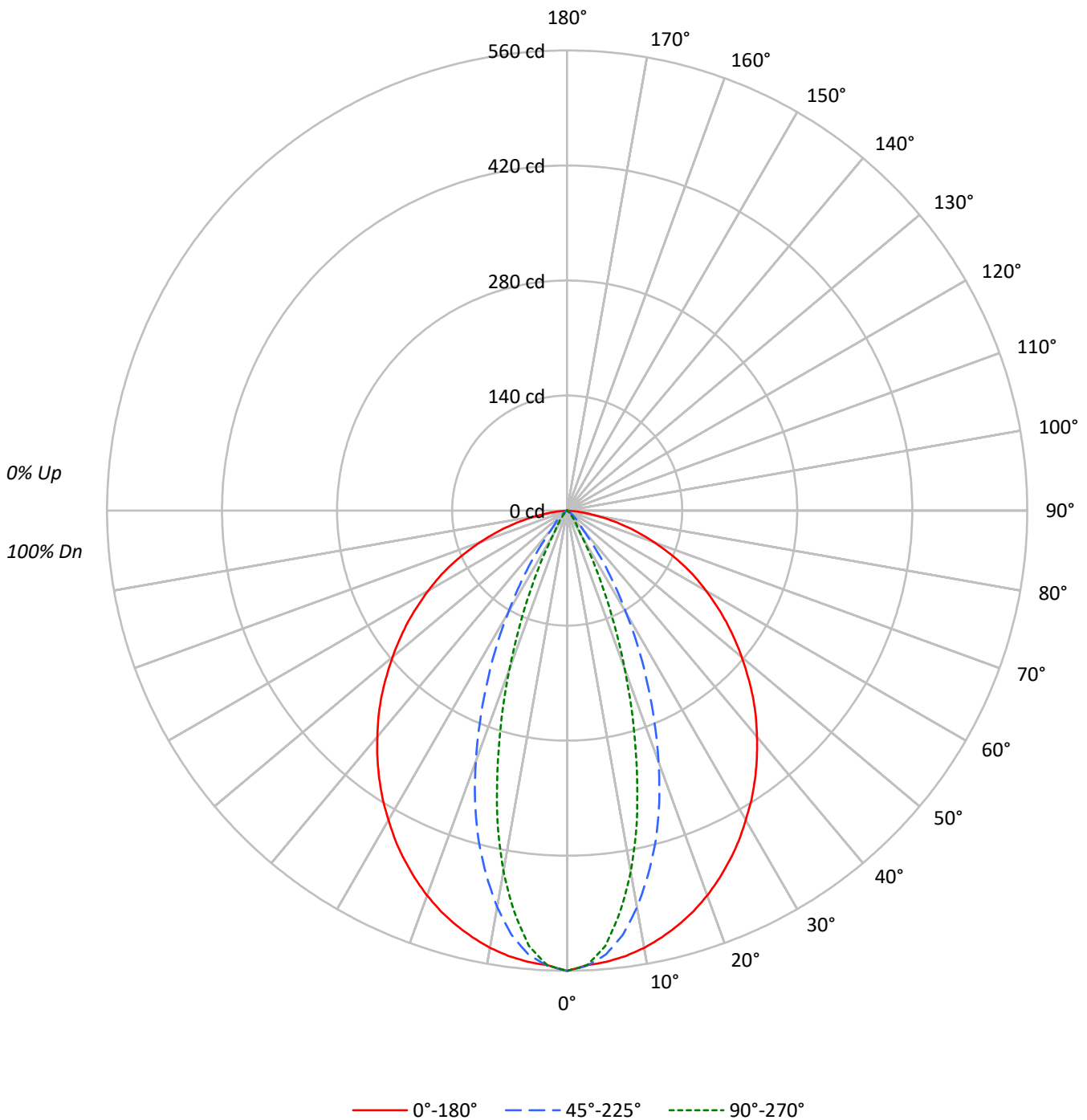
Lumens per Lamp: N/A
Luminaire Lumens: 509.6 lumens
Efficiency: N/A
Efficacy: 26.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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: P105218

CATALOG NUMBER: S122R3DR-S485D940-X4F0-XX-UDD-F-B

Luminous Intensity Polar Plot





TEST NUMBER: P1055218

CATALOG NUMBER: S122R3DR-S485D940-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	67	63	61
6	82	72	65	60	80	71	64	59	69	63	59	68	63	59	66	62	58	57
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°	10613	10613	10613
5°	10483	10312	10116
10°	10394	9427	8586
15°	10243	8160	6430
20°	10049	6557	4115
25°	9800	4806	2113
30°	9510	3142	691
35°	9219	1742	402
40°	8886	700	223
45°	8558	466	86
50°	8179	265	38
55°	7805	129	20
60°	7393	49	0
65°	6958	27	0
70°	6243	33	0
75°	5373	44	0
80°	4070	0	0
85°	1674	130	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8558 cd/sqm



TEST NUMBER: P1055218

CATALOG NUMBER: S122R3DR-S485D940-X4F0-XX-UDD-F-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.2	9.9
10°-20°	116.7	22.9
20°-30°	118.5	23.2
30°-40°	88.9	17.4
40°-50°	62.3	12.2
50°-60°	38.1	7.5
60°-70°	22.7	4.4
70°-80°	10.4	2.0
80°-90°	1.9	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°	285.4	56.0
0°-40°	374.3	73.4
0°-60°	474.6	93.1
0°-90°	509.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	509.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	560	560	560	560	560	
5°	551	556	542	532	532	52
15°	522	494	416	352	328	147
25°	469	386	230	131	101	216
35°	399	260	75	22	17	249
45°	319	137	17	5	3	246
55°	236	42	4	1	1	211
65°	155	12	1	1	0	153
75°	73	1	1	1	0	78
85°	8	0	1	1	0	13
90°	0	0	0	0	0	



TEST NUMBER: P1055218

CATALOG NUMBER: S122R3DR-S485D940-X4F0-XX-UDD-F-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	560.2	560.2	560.2	560.2	560.2
2.5°	553.8	562.2	554.4	553.1	553.8
5°	551.2	556.4	542.2	531.9	531.9
7.5°	546.7	546.7	520.3	499.1	492.6
10°	540.3	533.2	490.0	455.9	446.3
12.5°	531.9	515.2	454.6	406.3	390.9
15°	522.2	493.9	416.0	352.2	327.8
17.5°	511.3	470.1	372.8	293.6	265.3
20°	498.4	444.3	325.2	233.8	204.1
22.5°	484.2	416.0	276.9	180.3	148.8
25°	468.8	386.4	229.9	131.4	101.1
27.5°	452.7	355.5	186.7	90.2	61.8
30°	434.7	323.3	143.6	53.4	31.6
32.5°	417.3	292.4	107.5	29.0	23.2
35°	398.6	259.5	75.3	22.5	17.4
37.5°	379.3	228.6	46.4	16.7	12.9
40°	359.3	197.0	28.3	12.2	9.0
42.5°	340.0	167.4	22.5	8.4	5.8
45°	319.4	137.2	17.4	5.2	3.2
47.5°	298.1	109.5	12.9	3.2	1.9
50°	277.5	85.0	9.0	1.9	1.3
52.5°	256.9	62.5	5.8	1.3	0.6
55°	236.3	41.9	3.9	1.3	0.6
57.5°	215.7	29.6	2.6	0.6	0.6
60°	195.1	23.2	1.3	0.6	0.0
62.5°	175.8	18.0	1.3	0.6	0.6
65°	155.2	12.2	0.6	0.6	0.0
67.5°	133.3	7.7	0.6	0.6	0.0
70°	112.7	4.5	0.6	0.6	0.0
72.5°	92.7	2.6	0.6	0.6	0.0
75°	73.4	1.3	0.6	0.6	0.0
77.5°	54.7	0.6	0.0	0.6	0.0
80°	37.3	0.0	0.0	0.6	0.0
82.5°	21.9	0.0	0.0	0.6	0.0
85°	7.7	0.0	0.6	0.6	0.0
87.5°	0.0	0.0	0.6	0.6	0.0
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055218
 CATALOG NUMBER: S122R3DR-S485D940-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	14.42	15.68	14.78	15.99	16.30	0.00	0.00	0.00	0.00	0.00
	3H	18.16	19.28	18.54	19.61	19.97	0.00	0.00	0.00	0.00	0.00
	4H	19.47	20.51	19.87	20.86	21.25	0.00	0.00	0.00	0.00	0.00
	6H	20.32	21.28	20.74	21.65	22.04	0.00	0.00	0.00	0.00	0.00
	8H	20.54	21.44	20.97	21.83	22.24	0.00	0.00	0.00	0.00	0.00
	12H	20.60	21.46	21.03	21.85	22.28	0.00	0.00	0.00	0.00	0.00
4H	2H	14.17	15.21	14.57	15.56	15.95	0.00	0.00	0.00	0.00	0.00
	3H	17.91	18.77	18.33	19.17	19.57	0.00	0.00	0.00	0.00	0.00
	4H	19.21	19.97	19.64	20.39	20.84	0.00	0.00	0.00	0.00	0.00
	6H	20.13	20.78	20.59	21.23	21.70	0.00	0.00	0.00	0.00	0.00
	8H	20.38	21.00	20.86	21.44	21.92	0.00	0.00	0.00	0.00	0.00
	12H	20.49	21.02	20.97	21.51	21.98	0.00	0.00	0.00	0.00	0.00
8H	4H	19.06	19.68	19.53	20.12	20.60	0.00	0.00	0.00	0.00	0.00
	6H	19.96	20.46	20.47	20.96	21.44	0.00	0.00	0.00	0.00	0.00
	8H	20.22	20.67	20.75	21.18	21.67	0.00	0.00	0.00	0.00	0.00
	12H	20.34	20.73	20.86	21.22	21.80	0.00	0.00	0.00	0.00	0.00
12H	4H	19.02	19.55	19.50	20.04	20.51	0.00	0.00	0.00	0.00	0.00
	6H	19.90	20.34	20.42	20.86	21.35	0.00	0.00	0.00	0.00	0.00
	8H	20.18	20.57	20.69	21.06	21.63	0.00	0.00	0.00	0.00	0.00