

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: P1055247

Luminaire Tested: S122R3DR-S675D940-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055247  
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-S675D940-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: -

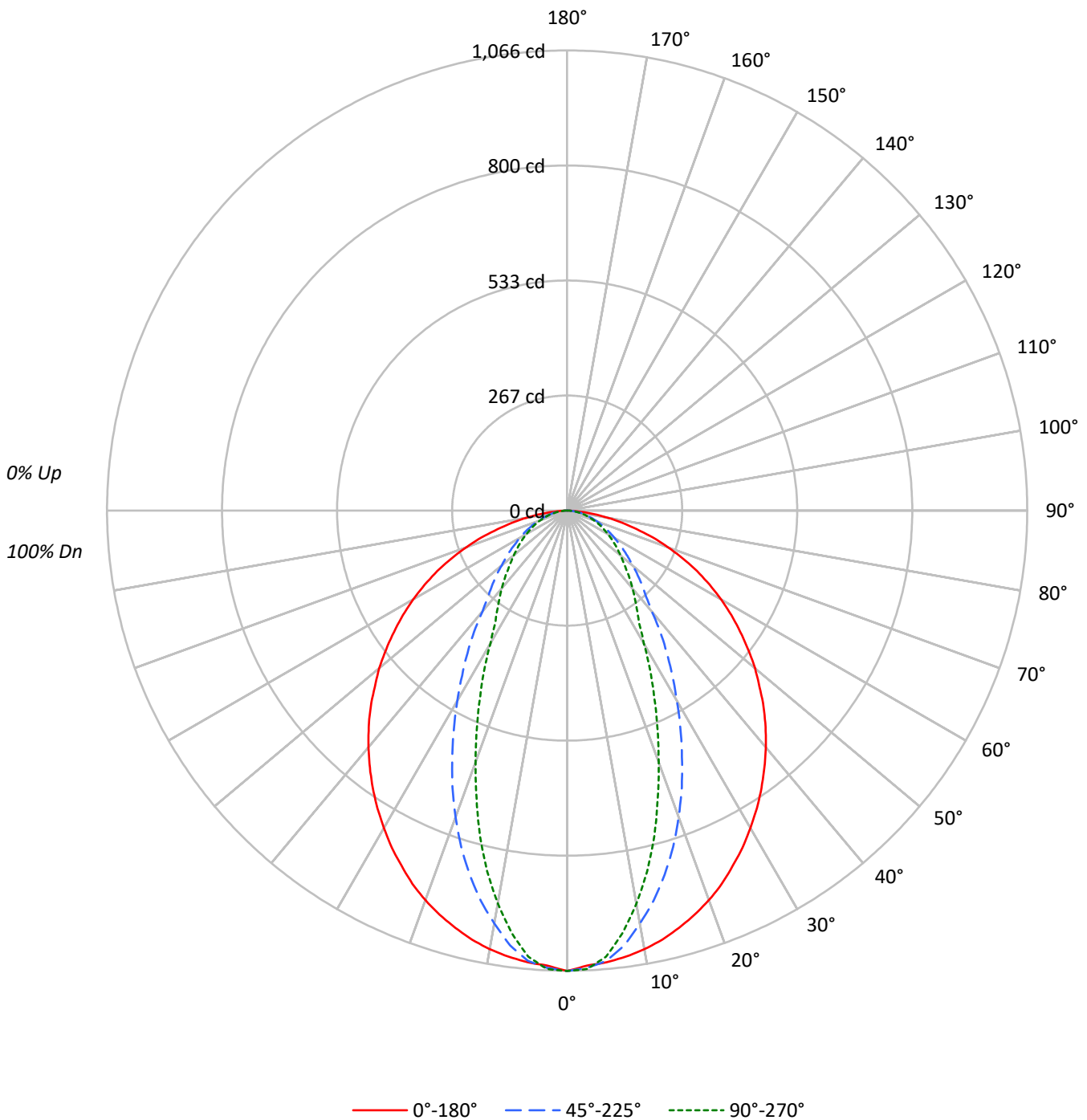
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1613.1 lumens  
Efficiency: N/A  
Efficacy: 61.1 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): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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: P105247

CATALOG NUMBER: S122R3DR-S675D940-X4F0-XX-UDD-F-W

### Luminous Intensity Polar Plot





TEST NUMBER: P1055247

CATALOG NUMBER: S122R3DR-S675D940-X4F0-XX-UDD-F-W

**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				100
1	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87				87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75				75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66				66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58				58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52				52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46				46
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				38
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35				35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32				32

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	20206	20206	20206
5°	19977	19910	19724
10°	19848	18682	17789
15°	19624	17123	15303
20°	19363	15228	12494
25°	18977	13159	9974
30°	18571	11120	7784
35°	18149	9302	6538
40°	17708	7543	5822
45°	17250	6594	5209
50°	16742	5836	4757
55°	16169	5272	4420
60°	15611	4797	4123
65°	14870	4398	3878
70°	13782	4099	3656
75°	12203	3719	3462
80°	10409	3502	3208
85°	7174	3109	2913

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 17250 cd/sqm



TEST NUMBER: P1055247

CATALOG NUMBER: S122R3DR-S675D940-X4F0-XX-UDD-F-W

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.7	6.1
10°-20°	246.7	15.3
20°-30°	304.0	18.8
30°-40°	291.7	18.1
40°-50°	251.6	15.6
50°-60°	195.2	12.1
60°-70°	133.7	8.3
70°-80°	72.6	4.5
80°-90°	19.9	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°	648.5	40.2
0°-40°	940.2	58.3
0°-60°	1387.0	86.0
0°-90°	1613.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1613.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1066	1066	1066	1066	1066	
5°	1050	1066	1047	1034	1037	100
15°	1000	970	873	802	780	282
25°	908	811	630	514	477	418
35°	785	622	402	300	283	491
45°	644	433	246	203	194	496
55°	490	260	160	138	134	438
65°	332	142	98	89	86	327
75°	167	65	51	48	47	179
85°	33	16	14	14	13	42
90°	0	0	0	0	0	



TEST NUMBER: P1055247

CATALOG NUMBER: S122R3DR-S675D940-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1066.5	1066.5	1066.5	1066.5	1066.5
2.5°	1054.9	1072.7	1060.2	1060.2	1062.9
5°	1050.4	1065.6	1046.9	1033.5	1037.1
7.5°	1042.4	1053.1	1015.7	987.1	986.2
10°	1031.7	1032.6	971.1	933.6	924.7
12.5°	1018.3	1004.1	925.6	869.4	856.0
15°	1000.5	970.2	873.0	801.6	780.2
17.5°	981.8	935.4	816.8	727.6	698.2
20°	960.4	893.5	755.3	653.6	619.7
22.5°	936.3	853.4	693.8	582.3	546.6
25°	907.8	810.6	629.5	513.6	477.1
27.5°	880.1	766.9	568.0	453.0	415.5
30°	848.9	719.6	508.3	395.0	355.8
32.5°	817.7	671.5	453.0	339.7	310.3
35°	784.7	622.4	402.2	299.6	282.7
37.5°	750.8	574.3	354.0	272.9	257.7
40°	716.0	526.1	305.0	247.0	235.4
42.5°	680.4	478.8	271.1	225.6	214.9
45°	643.8	433.4	246.1	203.3	194.4
47.5°	604.6	387.9	222.0	184.6	176.6
50°	568.0	344.2	198.0	167.6	161.4
52.5°	528.8	301.4	178.3	152.5	147.1
55°	489.5	260.4	159.6	138.2	133.8
57.5°	451.2	221.1	141.8	124.8	121.3
60°	412.0	189.9	126.6	112.4	108.8
62.5°	371.8	165.0	112.4	100.8	97.2
65°	331.7	141.8	98.1	89.2	86.5
67.5°	289.8	119.5	85.6	78.5	76.7
70°	248.8	99.9	74.0	67.8	66.0
72.5°	208.7	81.1	62.4	58.0	56.2
75°	166.7	65.1	50.8	48.2	47.3
77.5°	130.2	50.8	41.0	39.2	38.3
80°	95.4	37.5	32.1	30.3	29.4
82.5°	63.3	25.9	23.2	22.3	21.4
85°	33.0	16.1	14.3	14.3	13.4
87.5°	10.7	7.1	7.1	7.1	6.2
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1055247

CATALOG NUMBER: S122R3DR-S675D940-X4F0-XX-UDD-F-W

**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	20.05	21.52	20.42	21.83	22.15	14.86	16.33	15.22	16.64	16.95
	3H	22.38	23.70	22.76	24.03	24.39	16.51	17.82	16.88	18.15	18.51
	4H	23.28	24.51	23.68	24.86	25.24	17.14	18.38	17.54	18.73	19.11
	6H	23.94	25.08	24.35	25.45	25.84	17.63	18.77	18.05	19.14	19.53
	8H	24.15	25.23	24.58	25.62	26.02	17.80	18.89	18.23	19.28	19.68
	12H	24.26	25.30	24.69	25.68	26.11	17.92	18.96	18.35	19.34	19.77
4H	2H	20.07	21.30	20.47	21.65	22.03	15.57	16.81	15.97	17.16	17.54
	3H	22.48	23.51	22.89	23.91	24.31	17.42	18.45	17.83	18.85	19.25
	4H	23.41	24.33	23.84	24.75	25.19	18.17	19.09	18.60	19.51	19.95
	6H	24.19	24.99	24.65	25.43	25.89	18.78	19.59	19.24	20.03	20.49
	8H	24.46	25.21	24.92	25.65	26.12	19.00	19.75	19.46	20.19	20.66
	12H	24.64	25.30	25.12	25.78	26.26	19.16	19.83	19.64	20.31	20.78
8H	4H	23.40	24.15	23.87	24.60	25.07	18.55	19.30	19.01	19.74	20.21
	6H	24.21	24.83	24.71	25.32	25.80	19.29	19.90	19.78	20.40	20.87
	8H	24.51	25.07	25.03	25.58	26.07	19.58	20.13	20.10	20.65	21.13
	12H	24.74	25.23	25.25	25.73	26.29	19.83	20.31	20.34	20.81	21.37
12H	4H	23.38	24.05	23.87	24.53	25.00	18.61	19.27	19.09	19.75	20.22
	6H	24.19	24.74	24.70	25.25	25.74	19.37	19.93	19.89	20.44	20.93
	8H	24.52	25.01	25.03	25.50	26.07	19.73	20.22	20.24	20.71	21.27