

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: P1055231

Luminaire Tested: S122R3DR-S675D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055231  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-S675D840-X4F0-XX-UDD-F-S  
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

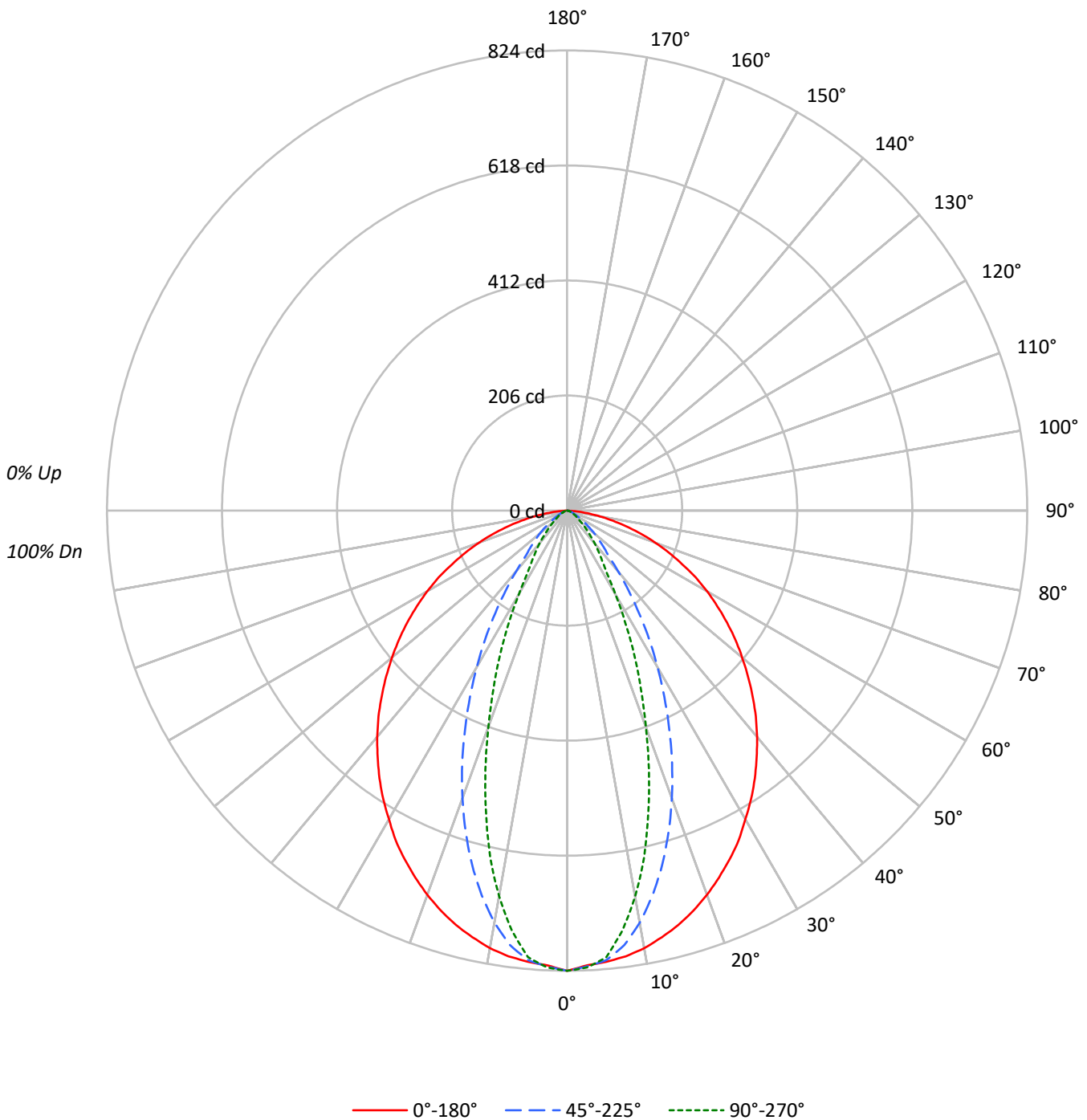
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 944.4 lumens  
Efficiency: N/A  
Efficacy: 35.8 lumens/watt  
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81  
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 (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: P1055231

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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40

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

	0°	45°	90°
0°	15613	15613	15613
5°	15422	15365	15268
10°	15310	14415	13503
15°	15074	12894	11013
20°	14762	11057	8307
25°	14397	9056	5933
30°	13962	7071	3778
35°	13546	5185	2523
40°	13088	3497	1897
45°	12582	2462	1353
50°	12055	1875	952
55°	11541	1301	700
60°	10981	879	572
65°	10185	632	453
70°	9284	504	393
75°	8059	447	293
80°	6394	327	327
85°	3522	435	217

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12582 cd/sqm

TEST NUMBER: P1055231

CATALOG NUMBER: S122R3DR-S675D840-X4F0-XX-UDD-F-S

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.3	8.0
10°-20°	184.9	19.6
20°-30°	211.2	22.4
30°-40°	179.1	19.0
40°-50°	133.7	14.2
50°-60°	86.4	9.1
60°-70°	48.2	5.1
70°-80°	21.1	2.2
80°-90°	4.4	0.5
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°	471.5	49.9
0°-40°	650.6	68.9
0°-60°	870.7	92.2
0°-90°	944.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	944.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	824	824	824	824	824	
5°	811	821	808	800	803	77
15°	768	749	657	588	562	216
25°	689	608	433	317	284	317
35°	586	441	224	122	109	366
45°	470	279	92	60	50	362
55°	349	132	39	24	21	312
65°	227	48	14	11	10	226
75°	110	10	6	5	4	117
85°	16	1	2	1	1	23
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	824.1	824.1	824.1	824.1	824.1
2.5°	815.0	827.1	817.0	817.0	819.0
5°	810.9	821.0	807.9	799.8	802.8
7.5°	804.9	811.9	784.7	760.4	758.4
10°	795.8	798.8	749.3	712.0	701.9
12.5°	782.6	775.6	705.9	653.4	636.2
15°	768.5	749.3	657.4	587.7	561.5
17.5°	751.3	717.0	603.9	519.1	486.8
20°	732.2	683.7	548.4	447.4	412.0
22.5°	710.9	646.3	490.8	379.7	344.4
25°	688.7	607.9	433.2	317.1	283.8
27.5°	665.5	567.5	376.7	260.5	224.2
30°	638.2	526.1	323.2	206.0	172.7
32.5°	613.0	482.7	273.7	159.6	131.3
35°	585.7	441.3	224.2	122.2	109.1
37.5°	557.4	399.9	180.8	103.0	91.9
40°	529.2	358.5	141.4	86.8	76.7
42.5°	499.9	318.1	109.1	72.7	62.6
45°	469.6	278.7	91.9	59.6	50.5
47.5°	439.3	239.3	76.7	47.5	40.4
50°	409.0	202.0	63.6	37.4	32.3
52.5°	379.7	166.6	50.5	30.3	26.3
55°	349.4	132.3	39.4	24.2	21.2
57.5°	319.1	103.0	30.3	20.2	18.2
60°	289.8	77.8	23.2	16.2	15.1
62.5°	259.5	62.6	18.2	13.1	12.1
65°	227.2	48.5	14.1	11.1	10.1
67.5°	197.9	35.3	11.1	9.1	8.1
70°	167.6	24.2	9.1	8.1	7.1
72.5°	138.4	15.1	7.1	6.1	6.1
75°	110.1	10.1	6.1	5.0	4.0
77.5°	83.8	6.1	4.0	4.0	3.0
80°	58.6	4.0	3.0	3.0	3.0
82.5°	36.4	3.0	2.0	2.0	2.0
85°	16.2	1.0	2.0	1.0	1.0
87.5°	3.0	1.0	1.0	1.0	1.0
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	17.80	19.12	18.16	19.43	19.75	4.11	5.43	4.48	5.74	6.06
	3H	20.27	21.44	20.65	21.77	22.13	4.97	6.14	5.35	6.47	6.83
	4H	21.22	22.32	21.63	22.67	23.05	5.24	6.33	5.64	6.68	7.06
	6H	21.91	22.92	22.33	23.29	23.68	5.42	6.43	5.84	6.80	7.19
	8H	22.11	23.06	22.54	23.45	23.85	5.50	6.45	5.93	6.84	7.24
	12H	22.19	23.10	22.62	23.48	23.91	5.52	6.43	5.95	6.81	7.24
4H	2H	17.58	18.68	17.99	19.03	19.41	4.68	5.77	5.08	6.12	6.51
	3H	20.07	20.96	20.48	21.37	21.77	5.72	6.61	6.13	7.02	7.42
	4H	21.01	21.81	21.45	22.23	22.67	6.08	6.88	6.51	7.30	7.74
	6H	21.77	22.46	22.23	22.90	23.37	6.37	7.06	6.83	7.50	7.97
	8H	22.01	22.65	22.48	23.10	23.57	6.46	7.11	6.93	7.55	8.02
	12H	22.14	22.71	22.63	23.19	23.66	6.51	7.07	6.99	7.56	8.03
8H	4H	20.88	21.52	21.35	21.97	22.44	6.45	7.10	6.92	7.54	8.01
	6H	21.62	22.14	22.12	22.64	23.12	6.80	7.33	7.31	7.82	8.31
	8H	21.86	22.33	22.38	22.85	23.34	6.94	7.41	7.46	7.92	8.42
	12H	22.01	22.43	22.53	22.92	23.49	7.02	7.43	7.54	7.93	8.50
12H	4H	20.83	21.40	21.32	21.89	22.36	6.57	7.14	7.06	7.62	8.10
	6H	21.56	22.03	22.08	22.54	23.04	6.92	7.39	7.44	7.91	8.40
	8H	21.82	22.24	22.34	22.73	23.30	7.10	7.51	7.61	8.01	8.58