

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055365

Luminaire Tested: S122R3DR-H675D840-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055365  
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-H675D840-X4F0-XX-UDD-FLL-B  
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

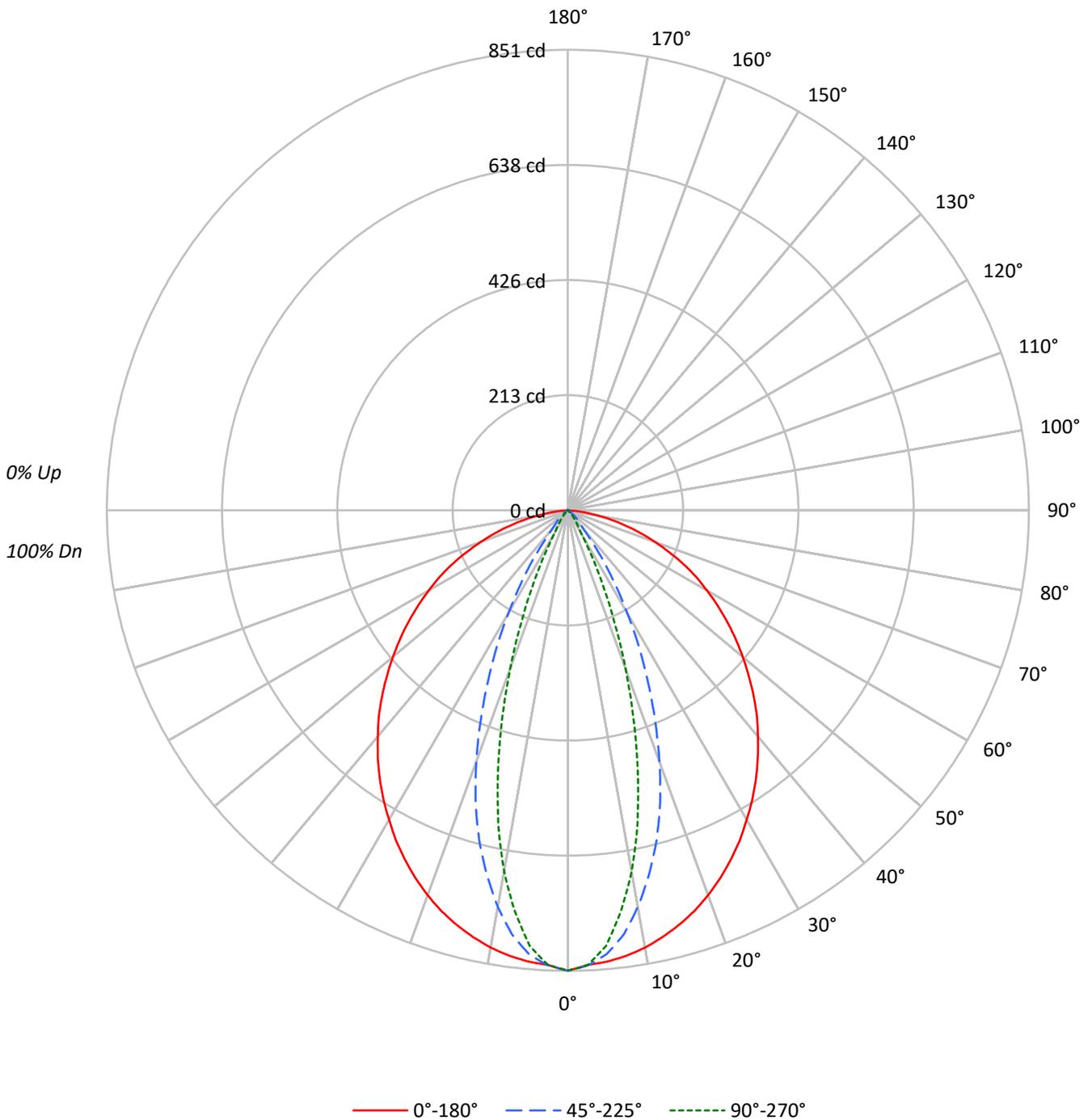
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 774.1 lumens  
Efficiency: N/A  
Efficacy: 32.5 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): 23.8  
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

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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					0
RW	70	50	30	10	70	50	30	10	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	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91					91			
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81					81			
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74					74			
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67					67			
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61					61			
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56					56			
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52					52			
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49					49			
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45					45			
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	47	44	43					43			

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

	0°	45°	90°
0°	16119	16119	16119
5°	15920	15660	15363
10°	15785	14317	13038
15°	15556	12390	9764
20°	15260	9958	6250
25°	14882	7298	3209
30°	14441	4771	1048
35°	14000	2646	611
40°	13496	1063	339
45°	12998	707	131
50°	12424	404	59
55°	11855	195	33
60°	11227	76	0
65°	10566	45	0
70°	9478	55	0
75°	8162	73	0
80°	6186	0	0
85°	2543	217	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12998 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	76.3	9.9
10°-20°	177.2	22.9
20°-30°	179.9	23.2
30°-40°	135.0	17.4
40°-50°	94.5	12.2
50°-60°	57.9	7.5
60°-70°	34.5	4.5
70°-80°	15.9	2.1
80°-90°	2.9	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°	433.4	56.0
0°-40°	568.4	73.4
0°-60°	720.8	93.1
0°-90°	774.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	774.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	851	851	851	851	851	
5°	837	845	823	808	808	79
15°	793	750	632	535	498	223
25°	712	587	349	200	154	328
35°	605	394	114	34	26	378
45°	485	208	26	8	5	374
55°	359	64	6	2	1	321
65°	236	19	1	1	0	232
75°	112	2	1	1	0	118
85°	12	0	1	1	0	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	850.8	850.8	850.8	850.8	850.8
2.5°	841.0	853.7	842.0	840.0	841.0
5°	837.1	844.9	823.4	807.8	807.8
7.5°	830.3	830.3	790.2	757.9	748.1
10°	820.5	809.7	744.2	692.4	677.7
12.5°	807.8	782.3	690.4	617.1	593.6
15°	793.1	750.1	631.7	534.9	497.8
17.5°	776.5	713.9	566.2	445.9	402.9
20°	756.9	674.8	493.9	355.0	310.0
22.5°	735.4	631.7	420.5	273.8	225.9
25°	711.9	586.8	349.1	199.5	153.5
27.5°	687.5	539.8	283.6	136.9	93.9
30°	660.1	490.9	218.1	81.2	47.9
32.5°	633.7	444.0	163.3	44.0	35.2
35°	605.3	394.1	114.4	34.2	26.4
37.5°	576.0	347.2	70.4	25.4	19.6
40°	545.7	299.2	43.0	18.6	13.7
42.5°	516.3	254.3	34.2	12.7	8.8
45°	485.1	208.3	26.4	7.8	4.9
47.5°	452.8	166.2	19.6	4.9	2.9
50°	421.5	129.1	13.7	2.9	2.0
52.5°	390.2	94.9	8.8	2.0	1.0
55°	358.9	63.6	5.9	2.0	1.0
57.5°	327.6	45.0	3.9	1.0	1.0
60°	296.3	35.2	2.0	1.0	0.0
62.5°	267.0	27.4	2.0	1.0	1.0
65°	235.7	18.6	1.0	1.0	0.0
67.5°	202.4	11.7	1.0	1.0	0.0
70°	171.1	6.8	1.0	1.0	0.0
72.5°	140.8	3.9	1.0	1.0	0.0
75°	111.5	2.0	1.0	1.0	0.0
77.5°	83.1	1.0	0.0	1.0	0.0
80°	56.7	0.0	0.0	1.0	0.0
82.5°	33.2	0.0	0.0	1.0	0.0
85°	11.7	0.0	1.0	1.0	0.0
87.5°	0.0	0.0	1.0	1.0	0.0
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	15.87	17.13	16.24	17.44	17.76	0.00	0.00	0.00	0.00	0.00
	3H	19.61	20.73	19.99	21.06	21.42	0.00	0.00	0.00	0.00	0.00
	4H	20.92	21.96	21.32	22.31	22.70	0.00	0.00	0.00	0.00	0.00
	6H	21.78	22.73	22.19	23.10	23.50	0.00	0.00	0.00	0.00	0.00
	8H	21.99	22.89	22.42	23.28	23.69	0.00	0.00	0.00	0.00	0.00
	12H	22.05	22.92	22.49	23.30	23.73	0.00	0.00	0.00	0.00	0.00
4H	2H	15.62	16.67	16.03	17.02	17.40	0.00	0.00	0.00	0.00	0.00
	3H	19.36	20.22	19.78	20.62	21.03	0.00	0.00	0.00	0.00	0.00
	4H	20.66	21.42	21.10	21.84	22.29	0.00	0.00	0.00	0.00	0.00
	6H	21.58	22.24	22.04	22.68	23.15	0.00	0.00	0.00	0.00	0.00
	8H	21.84	22.45	22.31	22.90	23.37	0.00	0.00	0.00	0.00	0.00
	12H	21.94	22.48	22.43	22.96	23.44	0.00	0.00	0.00	0.00	0.00
8H	4H	20.52	21.13	20.99	21.58	22.05	0.00	0.00	0.00	0.00	0.00
	6H	21.42	21.91	21.92	22.41	22.89	0.00	0.00	0.00	0.00	0.00
	8H	21.67	22.12	22.20	22.63	23.13	0.00	0.00	0.00	0.00	0.00
	12H	21.79	22.18	22.31	22.68	23.25	0.00	0.00	0.00	0.00	0.00
12H	4H	20.47	21.00	20.95	21.49	21.96	0.00	0.00	0.00	0.00	0.00
	6H	21.35	21.80	21.88	22.31	22.81	0.00	0.00	0.00	0.00	0.00
	8H	21.63	22.02	22.15	22.51	23.09	0.00	0.00	0.00	0.00	0.00