

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: P1055284

Luminaire Tested: S122R3DR-H1005D840-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1055284  
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-H1005D840-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: -

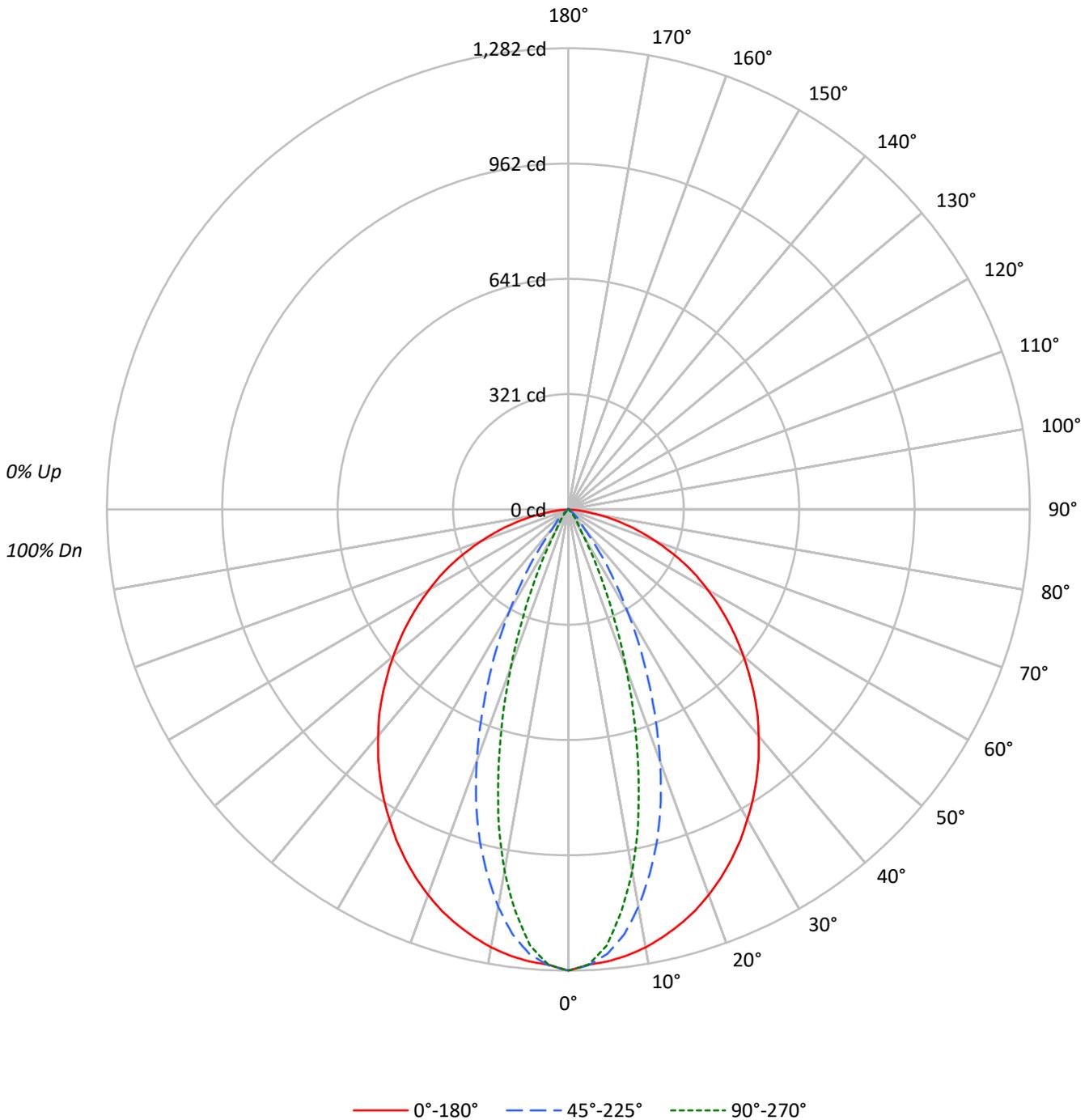
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1166.2 lumens  
Efficiency: N/A  
Efficacy: 31.9 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): 36.6  
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

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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°	24285	24285	24285
5°	23984	23592	23143
10°	23780	21570	19642
15°	23435	18667	14709
20°	22990	15000	9416
25°	22422	10996	4835
30°	21756	7187	1580
35°	21093	3987	921
40°	20332	1603	509
45°	19578	1066	198
50°	18716	607	85
55°	17860	291	50
60°	16915	110	0
65°	15919	67	0
70°	14281	83	0
75°	12298	110	0
80°	9328	0	0
85°	3848	326	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 19578 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.9	9.9
10°-20°	267.0	22.9
20°-30°	271.1	23.2
30°-40°	203.4	17.4
40°-50°	142.4	12.2
50°-60°	87.2	7.5
60°-70°	51.9	4.5
70°-80°	24.0	2.1
80°-90°	4.3	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°	653.0	56.0
0°-40°	856.4	73.4
0°-60°	1086.0	93.1
0°-90°	1166.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1166.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1282	1282	1282	1282	1282	
5°	1261	1273	1240	1217	1217	120
15°	1195	1130	952	806	750	337
25°	1073	884	526	300	231	494
35°	912	594	172	52	40	570
45°	731	314	40	12	7	563
55°	541	96	9	3	2	483
65°	355	28	2	2	0	350
75°	168	3	2	2	0	178
85°	18	0	2	2	0	30
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1281.8	1281.8	1281.8	1281.8	1281.8
2.5°	1267.0	1286.2	1268.5	1265.6	1267.0
5°	1261.1	1272.9	1240.5	1216.9	1216.9
7.5°	1250.8	1250.8	1190.4	1141.8	1127.1
10°	1236.1	1219.9	1121.2	1043.1	1021.0
12.5°	1216.9	1178.6	1040.1	929.6	894.3
15°	1194.8	1130.0	951.7	805.9	749.9
17.5°	1169.8	1075.5	853.0	671.8	607.0
20°	1140.3	1016.6	744.0	534.8	467.0
22.5°	1107.9	951.7	633.5	412.5	340.3
25°	1072.6	884.0	526.0	300.5	231.3
27.5°	1035.7	813.3	427.3	206.3	141.4
30°	994.5	739.6	328.5	122.3	72.2
32.5°	954.7	668.9	246.0	66.3	53.0
35°	912.0	593.7	172.4	51.6	39.8
37.5°	867.8	523.0	106.1	38.3	29.5
40°	822.1	450.8	64.8	28.0	20.6
42.5°	777.9	383.1	51.6	19.2	13.3
45°	730.7	313.8	39.8	11.8	7.4
47.5°	682.1	250.5	29.5	7.4	4.4
50°	635.0	194.5	20.6	4.4	2.9
52.5°	587.8	142.9	13.3	2.9	1.5
55°	540.7	95.8	8.8	2.9	1.5
57.5°	493.6	67.8	5.9	1.5	1.5
60°	446.4	53.0	2.9	1.5	0.0
62.5°	402.2	41.3	2.9	1.5	1.5
65°	355.1	28.0	1.5	1.5	0.0
67.5°	305.0	17.7	1.5	1.5	0.0
70°	257.8	10.3	1.5	1.5	0.0
72.5°	212.2	5.9	1.5	1.5	0.0
75°	168.0	2.9	1.5	1.5	0.0
77.5°	125.2	1.5	0.0	1.5	0.0
80°	85.5	0.0	0.0	1.5	0.0
82.5°	50.1	0.0	0.0	1.5	0.0
85°	17.7	0.0	1.5	1.5	0.0
87.5°	0.0	0.0	1.5	1.5	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	17.30	18.56	17.66	18.87	19.18	0.00	0.00	0.00	0.00	0.00
	3H	21.04	22.15	21.42	22.48	22.85	0.00	0.00	0.00	0.00	0.00
	4H	22.35	23.39	22.75	23.74	24.12	0.00	0.00	0.00	0.00	0.00
	6H	23.20	24.16	23.62	24.53	24.92	0.00	0.00	0.00	0.00	0.00
	8H	23.42	24.32	23.85	24.71	25.12	0.00	0.00	0.00	0.00	0.00
	12H	23.48	24.34	23.91	24.73	25.16	0.00	0.00	0.00	0.00	0.00
4H	2H	17.05	18.09	17.45	18.44	18.83	0.00	0.00	0.00	0.00	0.00
	3H	20.79	21.64	21.20	22.05	22.45	0.00	0.00	0.00	0.00	0.00
	4H	22.09	22.85	22.52	23.27	23.71	0.00	0.00	0.00	0.00	0.00
	6H	23.00	23.66	23.47	24.11	24.58	0.00	0.00	0.00	0.00	0.00
	8H	23.26	23.88	23.73	24.32	24.79	0.00	0.00	0.00	0.00	0.00
	12H	23.36	23.90	23.85	24.39	24.86	0.00	0.00	0.00	0.00	0.00
8H	4H	21.94	22.55	22.41	23.00	23.47	0.00	0.00	0.00	0.00	0.00
	6H	22.84	23.34	23.35	23.84	24.32	0.00	0.00	0.00	0.00	0.00
	8H	23.10	23.54	23.62	24.06	24.55	0.00	0.00	0.00	0.00	0.00
	12H	23.22	23.61	23.73	24.10	24.68	0.00	0.00	0.00	0.00	0.00
12H	4H	21.89	22.43	22.38	22.91	23.39	0.00	0.00	0.00	0.00	0.00
	6H	22.78	23.22	23.30	23.74	24.23	0.00	0.00	0.00	0.00	0.00
	8H	23.06	23.44	23.57	23.94	24.51	0.00	0.00	0.00	0.00	0.00