

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: P1055286

Luminaire Tested: S122R3DR-H1005D840-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055286  
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-H1005D840-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

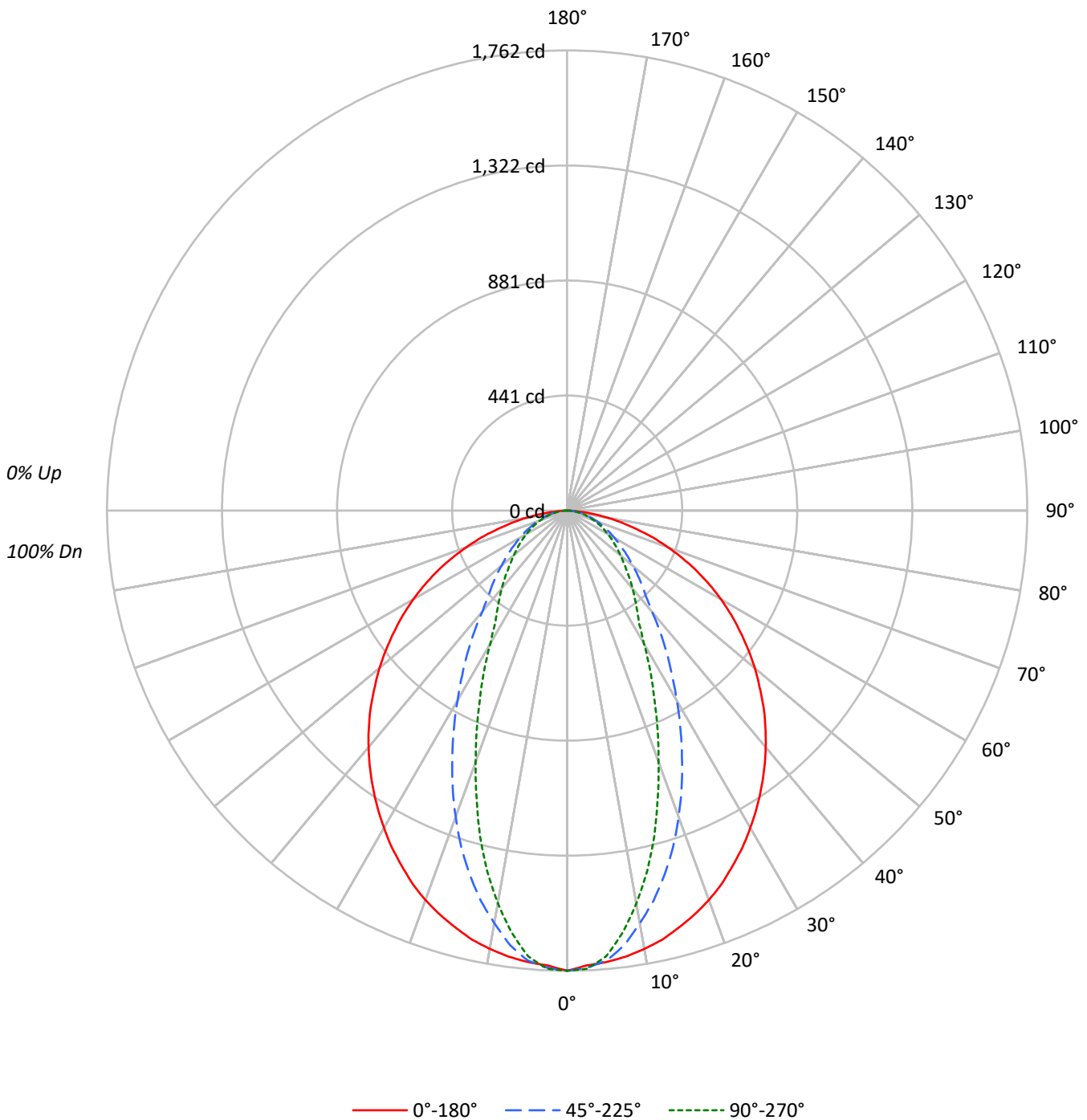
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2665.2 lumens  
Efficiency: N/A  
Efficacy: 72.8 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): 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	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°	33383	33383	33383
5°	33006	32894	32586
10°	32793	30866	29392
15°	32422	28290	25285
20°	31991	25160	20644
25°	31352	21743	16477
30°	30684	18372	12859
35°	29986	15367	10801
40°	29258	12462	9618
45°	28500	10894	8606
50°	27662	9641	7861
55°	26716	8710	7300
60°	25793	7927	6809
65°	24571	7267	6406
70°	22767	6775	6038
75°	20167	6149	5717
80°	17195	5783	5302
85°	11847	5130	4804

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 28500 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.5	6.1
10°-20°	407.7	15.3
20°-30°	502.3	18.8
30°-40°	481.9	18.1
40°-50°	415.7	15.6
50°-60°	322.5	12.1
60°-70°	220.8	8.3
70°-80°	119.9	4.5
80°-90°	32.9	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°	1071.5	40.2
0°-40°	1553.4	58.3
0°-60°	2291.6	86.0
0°-90°	2665.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2665.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1762	1762	1762	1762	1762	
5°	1736	1761	1730	1708	1713	165
15°	1653	1603	1442	1324	1289	466
25°	1500	1339	1040	849	788	691
35°	1296	1028	664	495	467	811
45°	1064	716	407	336	321	820
55°	809	430	264	228	221	724
65°	548	234	162	147	143	541
75°	276	108	84	80	78	295
85°	54	26	24	24	22	69
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1762.0	1762.0	1762.0	1762.0	1762.0
2.5°	1742.9	1772.4	1751.7	1751.7	1756.1
5°	1735.5	1760.6	1729.6	1707.5	1713.4
7.5°	1722.3	1739.9	1678.1	1630.9	1629.4
10°	1704.6	1706.1	1604.4	1542.5	1527.8
12.5°	1682.5	1658.9	1529.3	1436.4	1414.3
15°	1653.0	1602.9	1442.3	1324.5	1289.1
17.5°	1622.1	1545.5	1349.5	1202.2	1153.6
20°	1586.7	1476.2	1247.9	1079.9	1023.9
22.5°	1546.9	1409.9	1146.2	962.0	903.1
25°	1499.8	1339.2	1040.1	848.6	788.2
27.5°	1454.1	1267.0	938.5	748.4	686.5
30°	1402.6	1188.9	839.8	652.7	587.8
32.5°	1351.0	1109.4	748.4	561.3	512.7
35°	1296.5	1028.3	664.4	495.0	467.0
37.5°	1240.5	948.8	584.9	450.8	425.8
40°	1183.0	869.2	503.9	408.1	388.9
42.5°	1124.1	791.1	447.9	372.7	355.1
45°	1063.7	716.0	406.6	335.9	321.2
47.5°	998.9	640.9	366.8	305.0	291.7
50°	938.5	568.7	327.1	277.0	266.7
52.5°	873.7	498.0	294.7	251.9	243.1
55°	808.8	430.2	263.7	228.4	221.0
57.5°	745.5	365.4	234.3	206.3	200.4
60°	680.7	313.8	209.2	185.6	179.7
62.5°	614.4	272.6	185.6	166.5	160.6
65°	548.1	234.3	162.1	147.3	142.9
67.5°	478.8	197.4	141.4	129.6	126.7
70°	411.0	165.0	122.3	112.0	109.0
72.5°	344.7	134.1	103.1	95.8	92.8
75°	275.5	107.5	84.0	79.6	78.1
77.5°	215.1	84.0	67.8	64.8	63.4
80°	157.6	61.9	53.0	50.1	48.6
82.5°	104.6	42.7	38.3	36.8	35.4
85°	54.5	26.5	23.6	23.6	22.1
87.5°	17.7	11.8	11.8	11.8	10.3
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	21.80	23.27	22.16	23.58	23.89	16.60	18.07	16.97	18.39	18.70
	3H	24.13	25.44	24.50	25.77	26.13	18.25	19.57	18.63	19.90	20.26
	4H	25.02	26.26	25.42	26.61	26.99	18.89	20.12	19.29	20.47	20.85
	6H	25.68	26.82	26.10	27.19	27.58	19.38	20.52	19.79	20.89	21.28
	8H	25.89	26.98	26.32	27.37	27.77	19.55	20.63	19.98	21.02	21.43
	12H	26.01	27.05	26.44	27.43	27.86	19.67	20.70	20.10	21.09	21.52
4H	2H	21.81	23.05	22.21	23.40	23.78	17.32	18.55	17.72	18.90	19.28
	3H	24.23	25.25	24.64	25.65	26.05	19.17	20.19	19.58	20.59	20.99
	4H	25.15	26.08	25.59	26.49	26.93	19.91	20.84	20.35	21.25	21.69
	6H	25.93	26.73	26.39	27.18	27.64	20.53	21.33	20.99	21.77	22.24
	8H	26.20	26.95	26.67	27.40	27.87	20.75	21.49	21.21	21.94	22.41
	12H	26.38	27.05	26.86	27.53	28.00	20.91	21.58	21.39	22.05	22.53
8H	4H	25.15	25.90	25.61	26.34	26.81	20.29	21.04	20.76	21.49	21.95
	6H	25.96	26.57	26.45	27.07	27.54	21.03	21.65	21.53	22.14	22.62
	8H	26.26	26.81	26.77	27.32	27.81	21.33	21.88	21.84	22.39	22.88
	12H	26.49	26.98	27.00	27.47	28.04	21.57	22.06	22.08	22.55	23.12
12H	4H	25.13	25.80	25.61	26.28	26.75	20.35	21.02	20.83	21.50	21.97
	6H	25.93	26.49	26.45	27.00	27.49	21.12	21.67	21.63	22.18	22.67
	8H	26.27	26.75	26.78	27.25	27.81	21.47	21.96	21.98	22.45	23.02