

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: P1055371

Luminaire Tested: S122R3DR-H675D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055371
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-H675D927-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

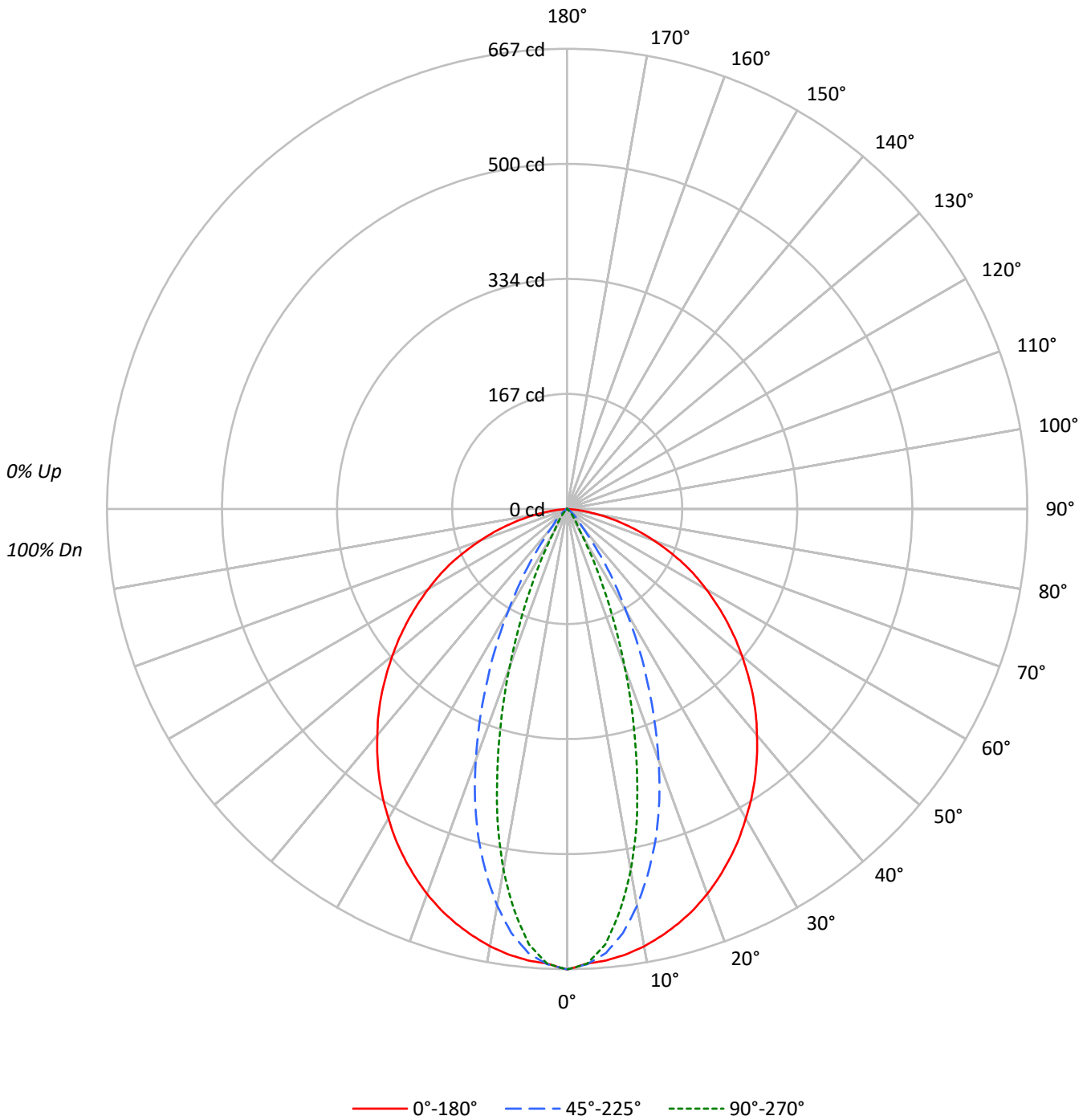
Lumens per Lamp: N/A
Luminaire Lumens: 607.2 lumens
Efficiency: N/A
Efficacy: 25.5 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
Input Voltage (V): 120
Input Current (A_{in}): 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°	12644	12644	12644
5°	12489	12284	12050
10°	12382	11231	10227
15°	12202	9721	7659
20°	11972	7811	4903
25°	11675	5726	2517
30°	11328	3743	823
35°	10984	2077	479
40°	10588	836	265
45°	10195	555	102
50°	9744	315	44
55°	9298	152	26
60°	8806	57	0
65°	8289	36	0
70°	7434	44	0
75°	6405	59	0
80°	4855	0	0
85°	2000	174	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10195 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.8	9.9
10°-20°	139.0	22.9
20°-30°	141.2	23.2
30°-40°	105.9	17.4
40°-50°	74.2	12.2
50°-60°	45.4	7.5
60°-70°	27.0	4.5
70°-80°	12.5	2.1
80°-90°	2.3	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°	340.0	56.0
0°-40°	445.9	73.4
0°-60°	565.5	93.1
0°-90°	607.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	607.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	667	667	667	667	667	
5°	657	663	646	634	634	62
15°	622	588	496	420	390	175
25°	558	460	274	156	120	257
35°	475	309	90	27	21	297
45°	380	163	21	6	4	293
55°	282	50	5	2	1	252
65°	185	15	1	1	0	182
75°	88	2	1	1	0	93
85°	9	0	1	1	0	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	667.4	667.4	667.4	667.4	667.4
2.5°	659.7	669.7	660.5	659.0	659.7
5°	656.7	662.8	645.9	633.6	633.6
7.5°	651.3	651.3	619.8	594.5	586.9
10°	643.6	635.2	583.8	543.1	531.6
12.5°	633.6	613.7	541.6	484.1	465.6
15°	622.1	588.4	495.6	419.6	390.5
17.5°	609.1	560.0	444.2	349.8	316.1
20°	593.8	529.3	387.4	278.5	243.2
22.5°	576.9	495.6	329.9	214.8	177.2
25°	558.5	460.3	273.9	156.5	120.4
27.5°	539.3	423.5	222.5	107.4	73.6
30°	517.8	385.1	171.1	63.7	37.6
32.5°	497.1	348.3	128.1	34.5	27.6
35°	474.9	309.2	89.8	26.8	20.7
37.5°	451.8	272.3	55.2	19.9	15.3
40°	428.1	234.7	33.8	14.6	10.7
42.5°	405.0	199.5	26.8	10.0	6.9
45°	380.5	163.4	20.7	6.1	3.8
47.5°	355.2	130.4	15.3	3.8	2.3
50°	330.6	101.3	10.7	2.3	1.5
52.5°	306.1	74.4	6.9	1.5	0.8
55°	281.5	49.9	4.6	1.5	0.8
57.5°	257.0	35.3	3.1	0.8	0.8
60°	232.4	27.6	1.5	0.8	0.0
62.5°	209.4	21.5	1.5	0.8	0.8
65°	184.9	14.6	0.8	0.8	0.0
67.5°	158.8	9.2	0.8	0.8	0.0
70°	134.2	5.4	0.8	0.8	0.0
72.5°	110.5	3.1	0.8	0.8	0.0
75°	87.5	1.5	0.8	0.8	0.0
77.5°	65.2	0.8	0.0	0.8	0.0
80°	44.5	0.0	0.0	0.8	0.0
82.5°	26.1	0.0	0.0	0.8	0.0
85°	9.2	0.0	0.8	0.8	0.0
87.5°	0.0	0.0	0.8	0.8	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	15.03	16.29	15.39	16.60	16.91	0.00	0.00	0.00	0.00	0.00
	3H	18.77	19.89	19.15	20.22	20.58	0.00	0.00	0.00	0.00	0.00
	4H	20.08	21.12	20.48	21.47	21.86	0.00	0.00	0.00	0.00	0.00
	6H	20.93	21.89	21.35	22.26	22.66	0.00	0.00	0.00	0.00	0.00
	8H	21.15	22.05	21.58	22.44	22.85	0.00	0.00	0.00	0.00	0.00
	12H	21.21	22.08	21.64	22.46	22.89	0.00	0.00	0.00	0.00	0.00
4H	2H	14.78	15.82	15.18	16.17	16.56	0.00	0.00	0.00	0.00	0.00
	3H	18.52	19.37	18.94	19.78	20.18	0.00	0.00	0.00	0.00	0.00
	4H	19.82	20.58	20.25	21.00	21.44	0.00	0.00	0.00	0.00	0.00
	6H	20.74	21.39	21.20	21.84	22.31	0.00	0.00	0.00	0.00	0.00
	8H	21.00	21.61	21.47	22.06	22.53	0.00	0.00	0.00	0.00	0.00
	12H	21.10	21.64	21.58	22.12	22.59	0.00	0.00	0.00	0.00	0.00
8H	4H	19.67	20.29	20.14	20.73	21.20	0.00	0.00	0.00	0.00	0.00
	6H	20.57	21.07	21.08	21.57	22.05	0.00	0.00	0.00	0.00	0.00
	8H	20.83	21.28	21.36	21.79	22.29	0.00	0.00	0.00	0.00	0.00
	12H	20.95	21.34	21.47	21.83	22.41	0.00	0.00	0.00	0.00	0.00
12H	4H	19.62	20.16	20.11	20.65	21.12	0.00	0.00	0.00	0.00	0.00
	6H	20.51	20.96	21.04	21.47	21.97	0.00	0.00	0.00	0.00	0.00
	8H	20.79	21.18	21.30	21.67	22.25	0.00	0.00	0.00	0.00	0.00