

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: P1055346

Luminaire Tested: S122R3DR-H485D927-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055346
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-H485D927-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

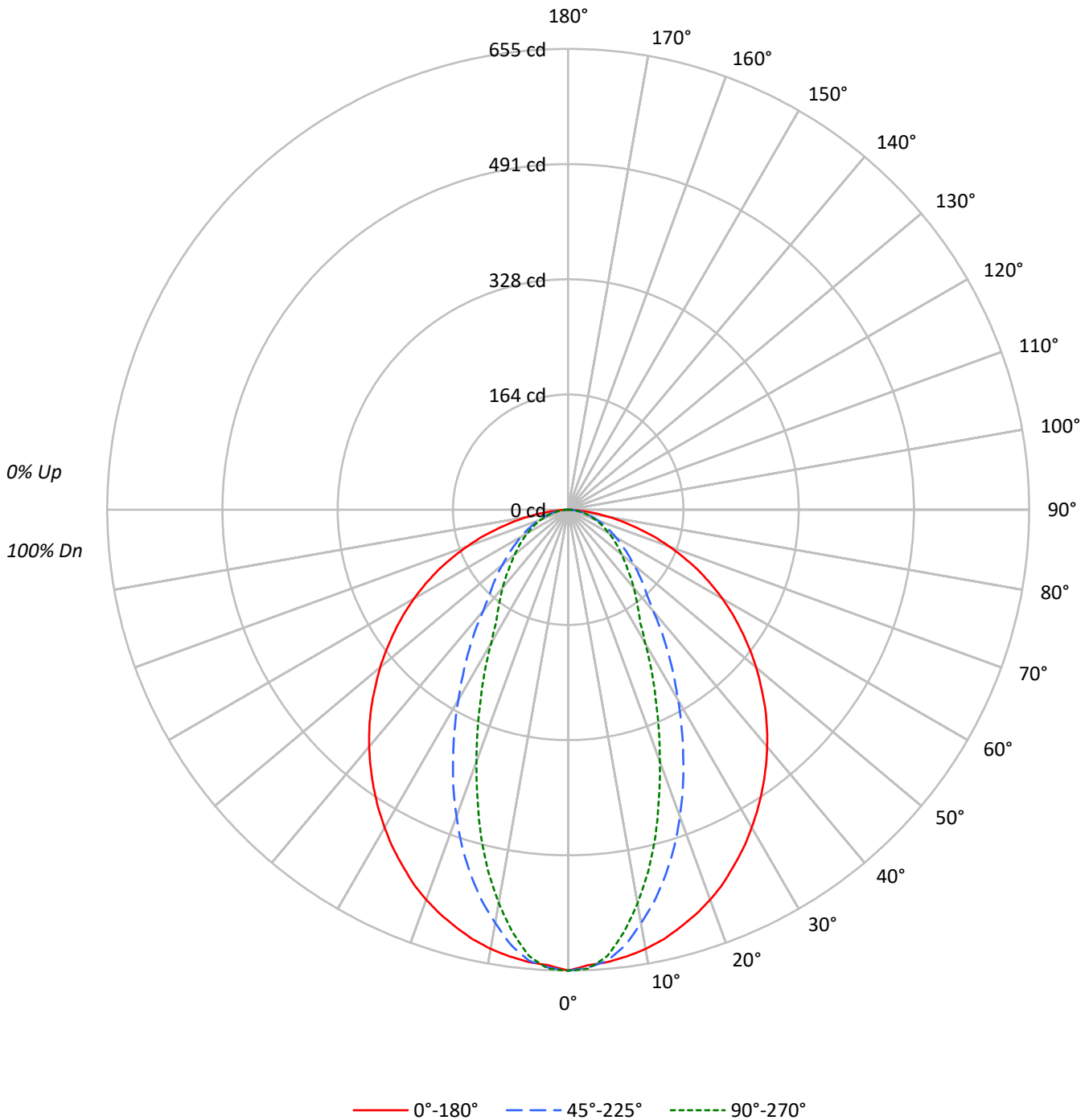
Lumens per Lamp: N/A
Luminaire Lumens: 990.9 lumens
Efficiency: N/A
Efficacy: 57.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89					87				
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77					75				
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68					66				
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60					58				
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54					52				
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48					46				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44					42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40					38				
9	62	50	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37					35				
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34					32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12411	12411	12411
5°	12272	12231	12115
10°	12193	11476	10927
15°	12055	10519	9401
20°	11893	9353	7676
25°	11656	8084	6125
30°	11409	6830	4782
35°	11148	5713	4015
40°	10877	4632	3576
45°	10597	4051	3199
50°	10284	3584	2921
55°	9932	3237	2715
60°	9590	2948	2531
65°	9136	2703	2380
70°	8464	2520	2243
75°	7496	2284	2123
80°	6394	2149	1975
85°	4413	1913	1783

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10597 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.0	6.1
10°-20°	151.6	15.3
20°-30°	186.8	18.8
30°-40°	179.2	18.1
40°-50°	154.6	15.6
50°-60°	119.9	12.1
60°-70°	82.1	8.3
70°-80°	44.6	4.5
80°-90°	12.2	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°	398.4	40.2
0°-40°	577.5	58.3
0°-60°	852.0	86.0
0°-90°	990.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	990.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	655	655	655	655	655	
5°	645	655	643	635	637	61
15°	615	596	536	492	479	173
25°	558	498	387	316	293	257
35°	482	382	247	184	174	301
45°	396	266	151	125	119	305
55°	301	160	98	85	82	269
65°	204	87	60	55	53	201
75°	102	40	31	30	29	110
85°	20	10	9	9	8	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	655.1	655.1	655.1	655.1	655.1
2.5°	648.0	658.9	651.3	651.3	652.9
5°	645.3	654.6	643.1	634.8	637.0
7.5°	640.3	646.9	623.9	606.4	605.8
10°	633.8	634.3	596.5	573.5	568.0
12.5°	625.5	616.8	568.6	534.1	525.8
15°	614.6	596.0	536.3	492.4	479.3
17.5°	603.1	574.6	501.7	447.0	428.9
20°	589.9	548.8	463.9	401.5	380.7
22.5°	575.1	524.2	426.2	357.7	335.8
25°	557.6	497.9	386.7	315.5	293.0
27.5°	540.6	471.1	348.9	278.3	255.3
30°	521.5	442.0	312.2	242.7	218.6
32.5°	502.3	412.5	278.3	208.7	190.6
35°	482.0	382.3	247.0	184.0	173.6
37.5°	461.2	352.8	217.5	167.6	158.3
40°	439.8	323.2	187.3	151.7	144.6
42.5°	417.9	294.1	166.5	138.6	132.0
45°	395.5	266.2	151.2	124.9	119.4
47.5°	371.4	238.3	136.4	113.4	108.5
50°	348.9	211.4	121.6	103.0	99.1
52.5°	324.8	185.1	109.6	93.7	90.4
55°	300.7	159.9	98.0	84.9	82.2
57.5°	277.2	135.8	87.1	76.7	74.5
60°	253.1	116.7	77.8	69.0	66.8
62.5°	228.4	101.3	69.0	61.9	59.7
65°	203.8	87.1	60.3	54.8	53.1
67.5°	178.0	73.4	52.6	48.2	47.1
70°	152.8	61.3	45.5	41.6	40.5
72.5°	128.2	49.8	38.3	35.6	34.5
75°	102.4	40.0	31.2	29.6	29.0
77.5°	80.0	31.2	25.2	24.1	23.6
80°	58.6	23.0	19.7	18.6	18.1
82.5°	38.9	15.9	14.2	13.7	13.1
85°	20.3	9.9	8.8	8.8	8.2
87.5°	6.6	4.4	4.4	4.4	3.8
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	18.36	19.83	18.72	20.14	20.45	13.17	14.63	13.53	14.95	15.26
	3H	20.69	22.00	21.07	22.33	22.70	14.81	16.13	15.19	16.46	16.82
	4H	21.58	22.82	21.98	23.17	23.55	15.45	16.68	15.85	17.03	17.41
	6H	22.25	23.39	22.66	23.75	24.15	15.94	17.08	16.36	17.45	17.84
	8H	22.45	23.54	22.88	23.93	24.33	16.11	17.20	16.54	17.59	17.99
	12H	22.57	23.61	23.00	23.99	24.42	16.23	17.27	16.66	17.65	18.08
4H	2H	18.38	19.61	18.78	19.96	20.34	13.88	15.12	14.28	15.47	15.85
	3H	20.79	21.81	21.20	22.21	22.61	15.73	16.75	16.14	17.15	17.56
	4H	21.72	22.64	22.15	23.06	23.50	16.48	17.40	16.91	17.81	18.25
	6H	22.49	23.30	22.95	23.74	24.20	17.09	17.89	17.55	18.34	18.80
	8H	22.77	23.51	23.23	23.96	24.43	17.31	18.06	17.77	18.50	18.97
	12H	22.94	23.61	23.43	24.09	24.56	17.47	18.14	17.95	18.62	19.09
8H	4H	21.71	22.46	22.17	22.90	23.37	16.85	17.60	17.32	18.05	18.52
	6H	22.52	23.13	23.02	23.63	24.11	17.59	18.21	18.09	18.70	19.18
	8H	22.82	23.37	23.33	23.88	24.37	17.89	18.44	18.40	18.95	19.44
	12H	23.05	23.54	23.56	24.03	24.60	18.13	18.62	18.64	19.11	19.68
12H	4H	21.69	22.36	22.17	22.84	23.31	16.91	17.58	17.39	18.06	18.53
	6H	22.49	23.05	23.01	23.56	24.05	17.68	18.23	18.19	18.74	19.23
	8H	22.83	23.32	23.34	23.81	24.38	18.03	18.52	18.54	19.01	19.58