

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: P1055398

Luminaire Tested: S122R3DR-H865D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055398
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-H865D927-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

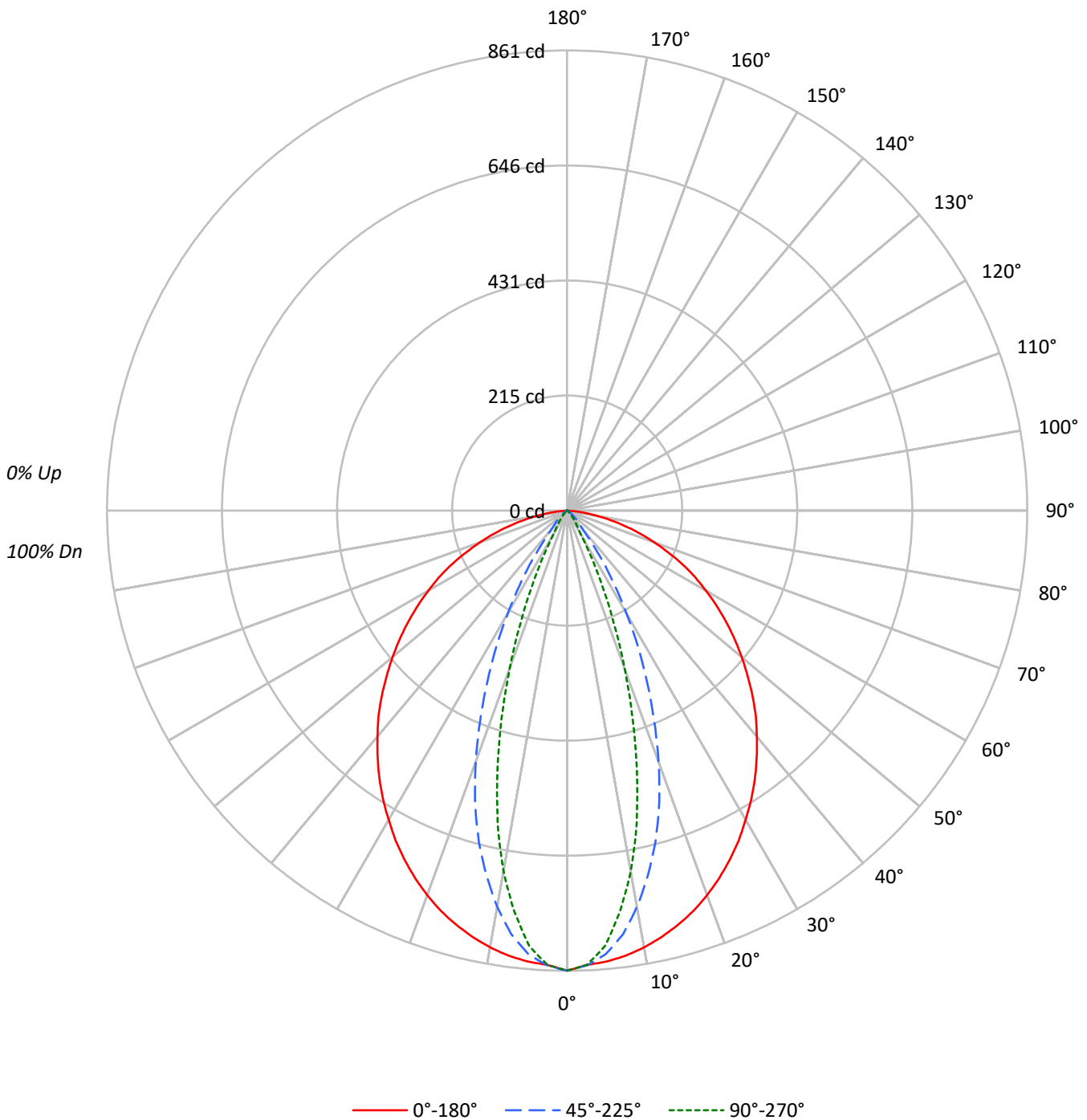
Lumens per Lamp: N/A
Luminaire Lumens: 783.1 lumens
Efficiency: N/A
Efficacy: 25.3 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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°	16307	16307	16307
5°	16107	15842	15542
10°	15968	14484	13190
15°	15736	12535	9878
20°	15438	10073	6323
25°	15055	7383	3246
30°	14609	4826	1061
35°	14164	2678	618
40°	13652	1076	344
45°	13148	715	131
50°	12568	410	59
55°	11994	195	33
60°	11360	76	0
65°	10687	45	0
70°	9589	55	0
75°	8257	73	0
80°	6263	0	0
85°	2587	217	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13148 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.2	9.9
10°-20°	179.3	22.9
20°-30°	182.0	23.2
30°-40°	136.6	17.4
40°-50°	95.6	12.2
50°-60°	58.5	7.5
60°-70°	34.9	4.5
70°-80°	16.1	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°	438.5	56.0
0°-40°	575.0	73.4
0°-60°	729.2	93.1
0°-90°	783.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	783.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	861	861	861	861	861	
5°	847	855	833	817	817	80
15°	802	759	639	541	504	226
25°	720	594	353	202	155	332
35°	612	399	116	35	27	383
45°	491	211	27	8	5	378
55°	363	64	6	2	1	325
65°	238	19	1	1	0	235
75°	113	2	1	1	0	120
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°	860.7	860.7	860.7	860.7	860.7
2.5°	850.8	863.7	851.8	849.8	850.8
5°	846.9	854.8	833.0	817.2	817.2
7.5°	839.9	839.9	799.4	766.7	756.8
10°	830.0	819.2	752.9	700.4	685.6
12.5°	817.2	791.5	698.5	624.3	600.5
15°	802.3	758.8	639.1	541.2	503.6
17.5°	785.5	722.2	572.8	451.1	407.6
20°	765.7	682.6	499.6	359.1	313.6
22.5°	744.0	639.1	425.4	277.0	228.5
25°	720.2	593.6	353.2	201.8	155.3
27.5°	695.5	546.1	286.9	138.5	95.0
30°	667.8	496.6	220.6	82.1	48.5
32.5°	641.1	449.2	165.2	44.5	35.6
35°	612.4	398.7	115.8	34.6	26.7
37.5°	582.7	351.2	71.2	25.7	19.8
40°	552.0	302.7	43.5	18.8	13.9
42.5°	522.4	257.2	34.6	12.9	8.9
45°	490.7	210.7	26.7	7.9	4.9
47.5°	458.1	168.2	19.8	4.9	3.0
50°	426.4	130.6	13.9	3.0	2.0
52.5°	394.7	96.0	8.9	2.0	1.0
55°	363.1	64.3	5.9	2.0	1.0
57.5°	331.4	45.5	4.0	1.0	1.0
60°	299.8	35.6	2.0	1.0	0.0
62.5°	270.1	27.7	2.0	1.0	1.0
65°	238.4	18.8	1.0	1.0	0.0
67.5°	204.8	11.9	1.0	1.0	0.0
70°	173.1	6.9	1.0	1.0	0.0
72.5°	142.5	4.0	1.0	1.0	0.0
75°	112.8	2.0	1.0	1.0	0.0
77.5°	84.1	1.0	0.0	1.0	0.0
80°	57.4	0.0	0.0	1.0	0.0
82.5°	33.6	0.0	0.0	1.0	0.0
85°	11.9	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	15.91	17.17	16.27	17.48	17.80	0.00	0.00	0.00	0.00	0.00
	3H	19.65	20.77	20.03	21.10	21.46	0.00	0.00	0.00	0.00	0.00
	4H	20.96	22.00	21.37	22.35	22.74	0.00	0.00	0.00	0.00	0.00
	6H	21.82	22.77	22.23	23.14	23.54	0.00	0.00	0.00	0.00	0.00
	8H	22.03	22.93	22.46	23.33	23.73	0.00	0.00	0.00	0.00	0.00
	12H	22.10	22.96	22.53	23.34	23.77	0.00	0.00	0.00	0.00	0.00
4H	2H	15.66	16.70	16.07	17.06	17.44	0.00	0.00	0.00	0.00	0.00
	3H	19.41	20.26	19.82	20.66	21.07	0.00	0.00	0.00	0.00	0.00
	4H	20.70	21.46	21.14	21.88	22.33	0.00	0.00	0.00	0.00	0.00
	6H	21.62	22.28	22.08	22.72	23.19	0.00	0.00	0.00	0.00	0.00
	8H	21.88	22.49	22.35	22.94	23.41	0.00	0.00	0.00	0.00	0.00
	12H	21.98	22.52	22.47	23.00	23.48	0.00	0.00	0.00	0.00	0.00
8H	4H	20.56	21.17	21.03	21.62	22.09	0.00	0.00	0.00	0.00	0.00
	6H	21.46	21.95	21.96	22.45	22.93	0.00	0.00	0.00	0.00	0.00
	8H	21.72	22.16	22.24	22.68	23.17	0.00	0.00	0.00	0.00	0.00
	12H	21.83	22.22	22.35	22.72	23.29	0.00	0.00	0.00	0.00	0.00
12H	4H	20.51	21.05	21.00	21.53	22.01	0.00	0.00	0.00	0.00	0.00
	6H	21.39	21.84	21.92	22.36	22.85	0.00	0.00	0.00	0.00	0.00
	8H	21.67	22.06	22.19	22.56	23.13	0.00	0.00	0.00	0.00	0.00