

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: P1055332

Luminaire Tested: S122R3DR-H485D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055332
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-H485D830-X4F0-XX-UDD-F-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

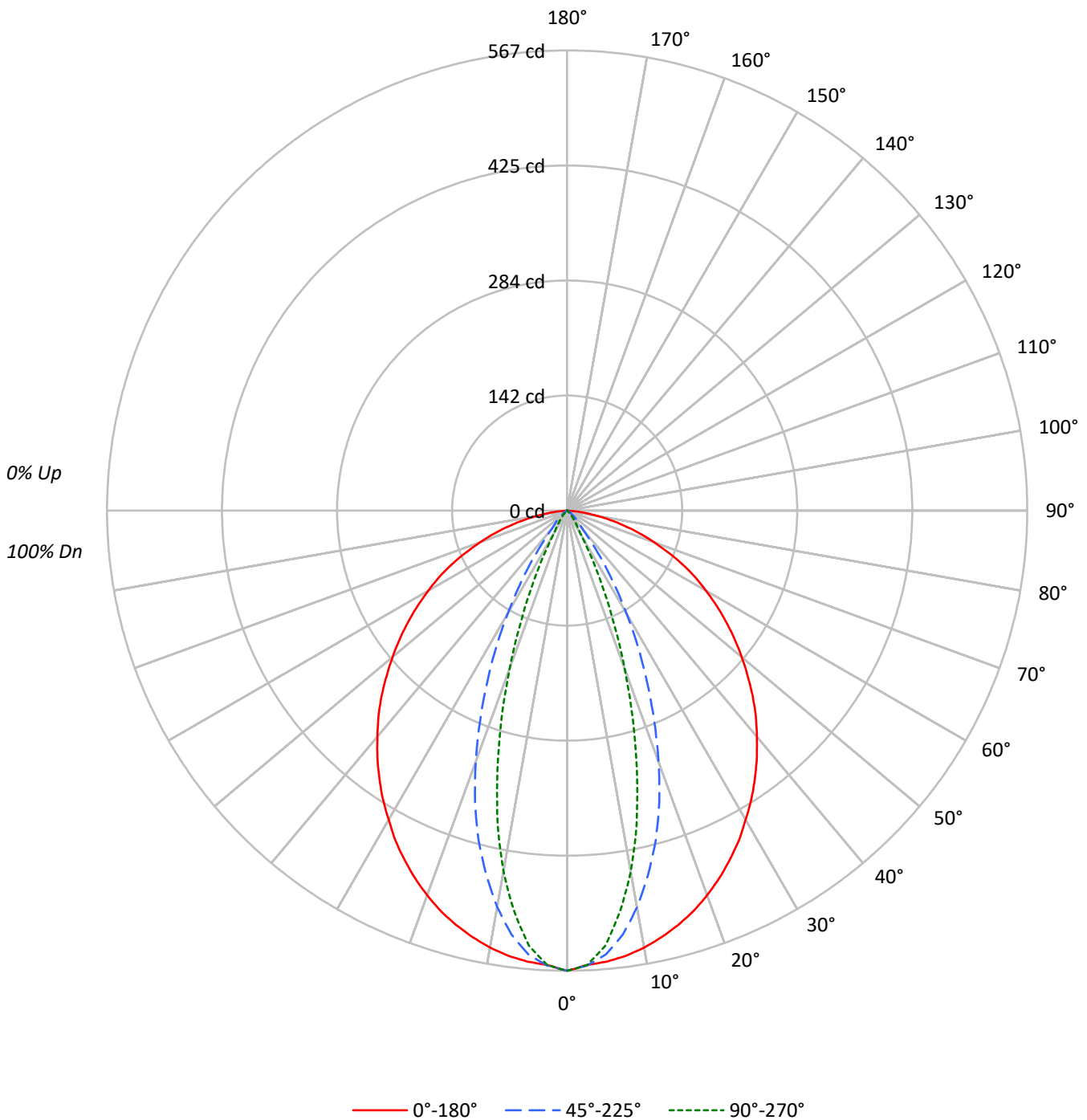
Lumens per Lamp: N/A
Luminaire Lumens: 515.9 lumens
Efficiency: N/A
Efficacy: 29.8 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	90					90			
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	67	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	69	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°	10742	10742	10742
5°	10610	10437	10238
10°	10519	9542	8688
15°	10366	8258	6506
20°	10170	6635	4165
25°	9919	4864	2139
30°	9624	3179	698
35°	9330	1765	407
40°	8995	710	225
45°	8662	472	88
50°	8279	268	38
55°	7901	129	23
60°	7484	49	0
65°	7043	31	0
70°	6320	39	0
75°	5439	51	0
80°	4124	0	0
85°	1696	152	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8662 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.8	9.9
10°-20°	118.1	22.9
20°-30°	119.9	23.2
30°-40°	90.0	17.4
40°-50°	63.0	12.2
50°-60°	38.6	7.5
60°-70°	23.0	4.5
70°-80°	10.6	2.1
80°-90°	1.9	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°	288.8	56.0
0°-40°	378.8	73.4
0°-60°	480.4	93.1
0°-90°	515.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	515.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	567	567	567	567	567	
5°	558	563	549	538	538	53
15°	528	500	421	356	332	149
25°	474	391	233	133	102	218
35°	403	263	76	23	18	252
45°	323	139	18	5	3	249
55°	239	42	4	1	1	214
65°	157	12	1	1	0	155
75°	74	1	1	1	0	79
85°	8	0	1	1	0	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	567.0	567.0	567.0	567.0	567.0
2.5°	560.5	569.0	561.1	559.8	560.5
5°	557.9	563.1	548.8	538.3	538.3
7.5°	553.3	553.3	526.6	505.1	498.6
10°	546.8	539.6	496.0	461.4	451.6
12.5°	538.3	521.4	460.1	411.2	395.6
15°	528.5	499.9	421.0	356.5	331.7
17.5°	517.5	475.8	377.3	297.2	268.5
20°	504.4	449.7	329.1	236.6	206.6
22.5°	490.1	421.0	280.2	182.5	150.5
25°	474.5	391.0	232.7	133.0	102.3
27.5°	458.2	359.8	189.0	91.2	62.6
30°	439.9	327.2	145.3	54.1	31.9
32.5°	422.3	295.9	108.8	29.3	23.5
35°	403.4	262.6	76.3	22.8	17.6
37.5°	383.9	231.4	46.9	16.9	13.0
40°	363.7	199.4	28.7	12.4	9.1
42.5°	344.1	169.4	22.8	8.5	5.9
45°	323.3	138.8	17.6	5.2	3.3
47.5°	301.7	110.8	13.0	3.3	2.0
50°	280.9	86.0	9.1	2.0	1.3
52.5°	260.0	63.2	5.9	1.3	0.7
55°	239.2	42.4	3.9	1.3	0.7
57.5°	218.3	30.0	2.6	0.7	0.7
60°	197.5	23.5	1.3	0.7	0.0
62.5°	177.9	18.2	1.3	0.7	0.7
65°	157.1	12.4	0.7	0.7	0.0
67.5°	134.9	7.8	0.7	0.7	0.0
70°	114.1	4.6	0.7	0.7	0.0
72.5°	93.8	2.6	0.7	0.7	0.0
75°	74.3	1.3	0.7	0.7	0.0
77.5°	55.4	0.7	0.0	0.7	0.0
80°	37.8	0.0	0.0	0.7	0.0
82.5°	22.2	0.0	0.0	0.7	0.0
85°	7.8	0.0	0.7	0.7	0.0
87.5°	0.0	0.0	0.7	0.7	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	14.46	15.72	14.83	16.03	16.35	0.00	0.00	0.00	0.00	0.00
	3H	18.20	19.32	18.58	19.65	20.02	0.00	0.00	0.00	0.00	0.00
	4H	19.51	20.55	19.92	20.90	21.29	0.00	0.00	0.00	0.00	0.00
	6H	20.37	21.32	20.78	21.69	22.09	0.00	0.00	0.00	0.00	0.00
	8H	20.58	21.49	21.01	21.88	22.28	0.00	0.00	0.00	0.00	0.00
	12H	20.65	21.51	21.08	21.89	22.32	0.00	0.00	0.00	0.00	0.00
4H	2H	14.21	15.26	14.62	15.61	15.99	0.00	0.00	0.00	0.00	0.00
	3H	17.96	18.81	18.37	19.21	19.62	0.00	0.00	0.00	0.00	0.00
	4H	19.25	20.01	19.69	20.43	20.88	0.00	0.00	0.00	0.00	0.00
	6H	20.17	20.83	20.63	21.27	21.74	0.00	0.00	0.00	0.00	0.00
	8H	20.43	21.04	20.90	21.49	21.96	0.00	0.00	0.00	0.00	0.00
	12H	20.53	21.07	21.02	21.55	22.03	0.00	0.00	0.00	0.00	0.00
8H	4H	19.11	19.72	19.58	20.17	20.64	0.00	0.00	0.00	0.00	0.00
	6H	20.01	20.50	20.51	21.00	21.48	0.00	0.00	0.00	0.00	0.00
	8H	20.27	20.71	20.79	21.23	21.72	0.00	0.00	0.00	0.00	0.00
	12H	20.38	20.77	20.90	21.27	21.84	0.00	0.00	0.00	0.00	0.00
12H	4H	19.06	19.60	19.54	20.08	20.55	0.00	0.00	0.00	0.00	0.00
	6H	19.94	20.39	20.47	20.91	21.40	0.00	0.00	0.00	0.00	0.00
	8H	20.22	20.61	20.74	21.11	21.68	0.00	0.00	0.00	0.00	0.00