

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055310

Luminaire Tested: S122R3DR-H290D835-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055310
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-H290D835-X4F0-XX-UDD-FLL-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

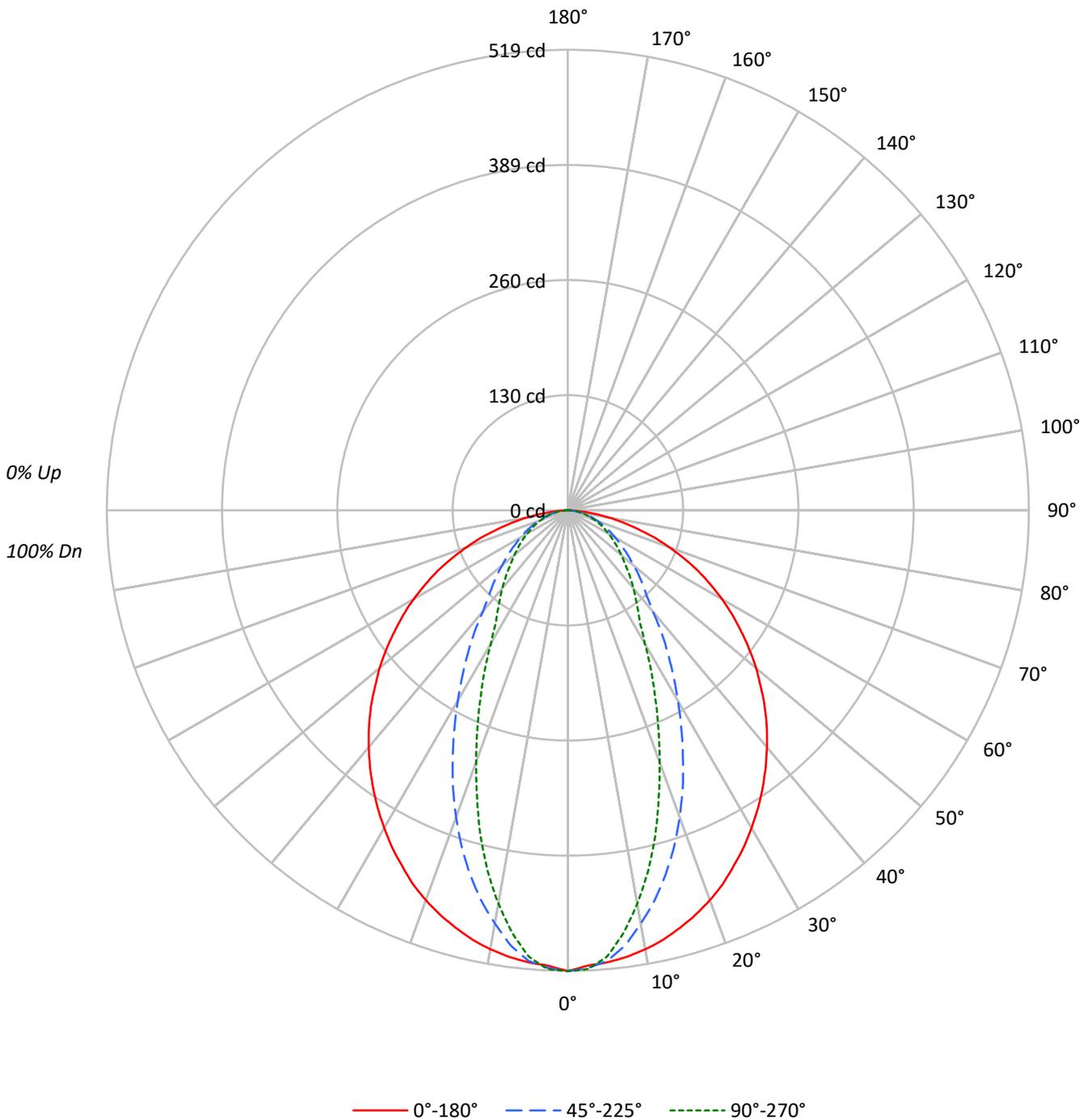
Lumens per Lamp: N/A
Luminaire Lumens: 785.5 lumens
Efficiency: N/A
Efficacy: 67.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	9839	9839	9839
5°	9728	9694	9604
10°	9665	9096	8663
15°	9556	8338	7451
20°	9428	7415	6085
25°	9240	6407	4856
30°	9044	5415	3789
35°	8837	4529	3182
40°	8624	3673	2834
45°	8400	3210	2537
50°	8153	2841	2317
55°	7875	2567	2150
60°	7601	2338	2008
65°	7240	2143	1887
70°	6708	1994	1778
75°	5944	1808	1684
80°	5073	1702	1560
85°	3500	1500	1413

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8400 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.6	6.1
10°-20°	120.1	15.3
20°-30°	148.0	18.8
30°-40°	142.0	18.1
40°-50°	122.5	15.6
50°-60°	95.0	12.1
60°-70°	65.1	8.3
70°-80°	35.3	4.5
80°-90°	9.7	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°	315.8	40.2
0°-40°	457.8	58.3
0°-60°	675.4	86.0
0°-90°	785.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	785.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	519	519	519	519	519	
5°	512	519	510	503	505	49
15°	487	472	425	390	380	137
25°	442	395	306	250	232	204
35°	382	303	196	146	138	239
45°	314	211	120	99	95	242
55°	238	127	78	67	65	213
65°	162	69	48	43	42	159
75°	81	32	25	23	23	87
85°	16	8	7	7	6	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	519.3	519.3	519.3	519.3	519.3
2.5°	513.6	522.3	516.3	516.3	517.6
5°	511.5	518.9	509.7	503.2	505.0
7.5°	507.6	512.8	494.5	480.7	480.2
10°	502.4	502.8	472.8	454.6	450.3
12.5°	495.8	488.9	450.7	423.3	416.8
15°	487.2	472.4	425.1	390.3	379.9
17.5°	478.0	455.5	397.7	354.3	340.0
20°	467.6	435.1	367.8	318.3	301.8
22.5°	455.9	415.5	337.8	283.5	266.2
25°	442.0	394.7	306.5	250.1	232.3
27.5°	428.5	373.4	276.6	220.6	202.3
30°	413.4	350.4	247.5	192.3	173.2
32.5°	398.2	326.9	220.6	165.4	151.1
35°	382.1	303.1	195.8	145.9	137.6
37.5°	365.6	279.6	172.4	132.9	125.5
40°	348.7	256.2	148.5	120.3	114.6
42.5°	331.3	233.2	132.0	109.9	104.6
45°	313.5	211.0	119.8	99.0	94.7
47.5°	294.4	188.9	108.1	89.9	86.0
50°	276.6	167.6	96.4	81.6	78.6
52.5°	257.5	146.8	86.8	74.2	71.6
55°	238.4	126.8	77.7	67.3	65.1
57.5°	219.7	107.7	69.0	60.8	59.1
60°	200.6	92.5	61.7	54.7	53.0
62.5°	181.1	80.3	54.7	49.1	47.3
65°	161.5	69.0	47.8	43.4	42.1
67.5°	141.1	58.2	41.7	38.2	37.3
70°	121.1	48.6	36.0	33.0	32.1
72.5°	101.6	39.5	30.4	28.2	27.4
75°	81.2	31.7	24.7	23.4	23.0
77.5°	63.4	24.7	20.0	19.1	18.7
80°	46.5	18.2	15.6	14.8	14.3
82.5°	30.8	12.6	11.3	10.9	10.4
85°	16.1	7.8	6.9	6.9	6.5
87.5°	5.2	3.5	3.5	3.5	3.0
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	17.55	19.02	17.92	19.33	19.65	12.36	13.83	12.72	14.14	14.46
	3H	19.88	21.20	20.26	21.53	21.89	14.01	15.32	14.38	15.65	16.01
	4H	20.78	22.01	21.18	22.36	22.74	14.64	15.87	15.04	16.22	16.60
	6H	21.44	22.58	21.85	22.95	23.34	15.13	16.27	15.55	16.64	17.03
	8H	21.65	22.73	22.08	23.12	23.52	15.30	16.39	15.73	16.78	17.18
	12H	21.76	22.80	22.19	23.18	23.61	15.42	16.46	15.85	16.84	17.27
4H	2H	17.57	18.80	17.97	19.15	19.53	13.08	14.31	13.48	14.66	15.04
	3H	19.98	21.01	20.39	21.41	21.81	14.92	15.95	15.33	16.35	16.75
	4H	20.91	21.83	21.34	22.25	22.69	15.67	16.59	16.10	17.01	17.45
	6H	21.69	22.49	22.15	22.93	23.39	16.28	17.08	16.74	17.53	17.99
	8H	21.96	22.71	22.42	23.15	23.62	16.50	17.25	16.96	17.69	18.16
	12H	22.14	22.80	22.62	23.28	23.75	16.66	17.33	17.14	17.81	18.28
8H	4H	20.90	21.65	21.37	22.10	22.57	16.05	16.79	16.51	17.24	17.71
	6H	21.71	22.33	22.21	22.82	23.30	16.79	17.40	17.28	17.90	18.37
	8H	22.01	22.57	22.53	23.08	23.57	17.08	17.63	17.60	18.15	18.63
	12H	22.24	22.73	22.75	23.22	23.79	17.32	17.81	17.83	18.31	18.87
12H	4H	20.88	21.55	21.37	22.03	22.50	16.10	16.77	16.59	17.25	17.72
	6H	21.69	22.24	22.20	22.75	23.24	16.87	17.43	17.39	17.94	18.42
	8H	22.02	22.51	22.53	23.00	23.57	17.23	17.72	17.74	18.21	18.77