

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: P1055175

Luminaire Tested: S122R3DR-S290D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055175
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-S290D835-X4F0-XX-UDD-F-W
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

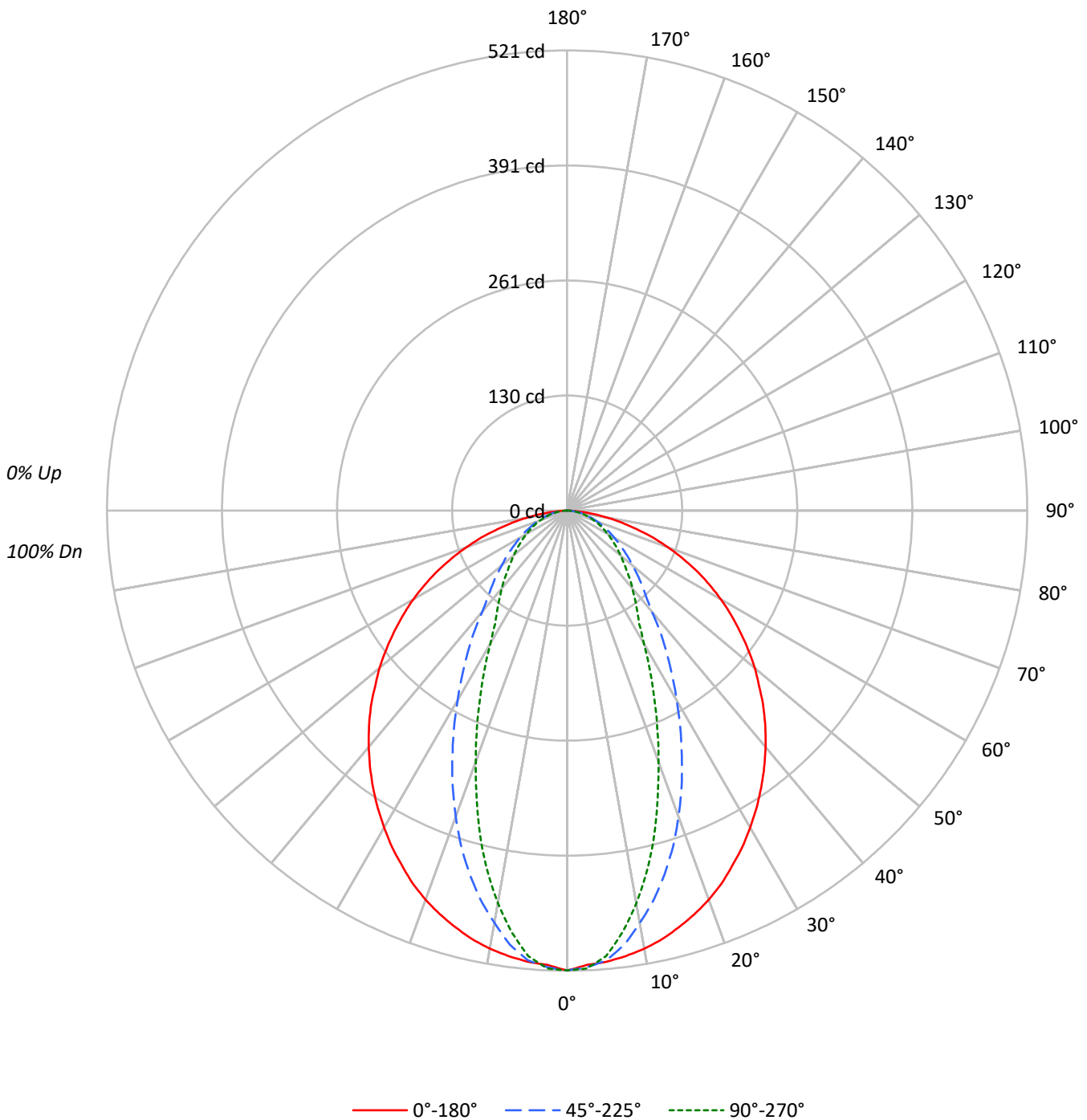
Lumens per Lamp: N/A
Luminaire Lumens: 787.4 lumens
Efficiency: N/A
Efficacy: 62.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
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	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°	9863	9863	9863
5°	9751	9718	9627
10°	9688	9119	8684
15°	9580	8358	7471
20°	9452	7434	6099
25°	9263	6424	4869
30°	9066	5428	3800
35°	8858	4540	3192
40°	8644	3683	2842
45°	8421	3218	2543
50°	8173	2847	2323
55°	7894	2573	2157
60°	7620	2342	2012
65°	7258	2147	1892
70°	6725	2000	1784
75°	5959	1815	1691
80°	5084	1713	1571
85°	3500	1522	1413

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8421 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.7	6.1
10°-20°	120.4	15.3
20°-30°	148.4	18.8
30°-40°	142.4	18.1
40°-50°	122.8	15.6
50°-60°	95.3	12.1
60°-70°	65.2	8.3
70°-80°	35.4	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°	316.5	40.2
0°-40°	458.9	58.3
0°-60°	677.0	86.0
0°-90°	787.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	787.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	521	521	521	521	521	
5°	513	520	511	504	506	49
15°	488	474	426	391	381	138
25°	443	396	307	251	233	204
35°	383	304	196	146	138	240
45°	314	212	120	99	95	242
55°	239	127	78	68	65	214
65°	162	69	48	44	42	160
75°	81	32	25	24	23	87
85°	16	8	7	7	6	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	520.6	520.6	520.6	520.6	520.6
2.5°	514.9	523.6	517.5	517.5	518.8
5°	512.7	520.1	511.0	504.5	506.2
7.5°	508.8	514.0	495.8	481.8	481.4
10°	503.6	504.0	474.0	455.7	451.4
12.5°	497.1	490.1	451.8	424.4	417.8
15°	488.4	473.6	426.1	391.3	380.9
17.5°	479.2	456.6	398.7	355.2	340.8
20°	468.8	436.1	368.7	319.0	302.5
22.5°	457.0	416.5	338.6	284.2	266.8
25°	443.1	395.7	307.3	250.7	232.9
27.5°	429.6	374.3	277.3	221.1	202.8
30°	414.4	351.3	248.1	192.8	173.7
32.5°	399.1	327.7	221.1	165.8	151.5
35°	383.0	303.8	196.3	146.2	138.0
37.5°	366.5	280.3	172.8	133.2	125.8
40°	349.5	256.8	148.9	120.6	114.9
42.5°	332.1	233.7	132.3	110.1	104.9
45°	314.3	211.5	120.1	99.2	94.9
47.5°	295.1	189.3	108.4	90.1	86.2
50°	277.3	168.0	96.6	81.8	78.8
52.5°	258.1	147.1	87.1	74.4	71.8
55°	239.0	127.1	77.9	67.5	65.3
57.5°	220.2	107.9	69.2	60.9	59.2
60°	201.1	92.7	61.8	54.8	53.1
62.5°	181.5	80.5	54.8	49.2	47.4
65°	161.9	69.2	47.9	43.5	42.2
67.5°	141.5	58.3	41.8	38.3	37.4
70°	121.4	48.7	36.1	33.1	32.2
72.5°	101.9	39.6	30.5	28.3	27.4
75°	81.4	31.8	24.8	23.5	23.1
77.5°	63.5	24.8	20.0	19.2	18.7
80°	46.6	18.3	15.7	14.8	14.4
82.5°	30.9	12.6	11.3	10.9	10.4
85°	16.1	7.8	7.0	7.0	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	17.56	19.03	17.92	19.34	19.66	12.36	13.83	12.73	14.14	14.46
	3H	19.89	21.21	20.27	21.53	21.90	14.01	15.33	14.39	15.66	16.02
	4H	20.79	22.02	21.19	22.37	22.75	14.65	15.88	15.05	16.23	16.61
	6H	21.45	22.59	21.86	22.95	23.35	15.14	16.28	15.56	16.65	17.04
	8H	21.66	22.74	22.08	23.13	23.53	15.31	16.40	15.74	16.79	17.19
	12H	21.77	22.81	22.20	23.19	23.62	15.43	16.47	15.86	16.85	17.28
4H	2H	17.58	18.81	17.98	19.16	19.54	13.08	14.31	13.48	14.66	15.04
	3H	19.99	21.01	20.40	21.41	21.81	14.93	15.95	15.34	16.35	16.76
	4H	20.92	21.84	21.35	22.26	22.70	15.68	16.60	16.11	17.02	17.46
	6H	21.70	22.50	22.15	22.94	23.40	16.29	17.09	16.75	17.54	18.00
	8H	21.97	22.72	22.43	23.16	23.63	16.51	17.26	16.97	17.70	18.17
	12H	22.14	22.81	22.63	23.29	23.76	16.67	17.34	17.15	17.82	18.29
8H	4H	20.91	21.66	21.38	22.11	22.57	16.05	16.80	16.52	17.25	17.72
	6H	21.72	22.34	22.22	22.83	23.31	16.79	17.41	17.29	17.90	18.38
	8H	22.02	22.57	22.54	23.09	23.57	17.09	17.64	17.61	18.15	18.64
	12H	22.25	22.74	22.76	23.23	23.80	17.33	17.82	17.84	18.32	18.88
12H	4H	20.89	21.56	21.37	22.04	22.51	16.11	16.78	16.60	17.26	17.73
	6H	21.69	22.25	22.21	22.76	23.25	16.88	17.44	17.40	17.95	18.43
	8H	22.03	22.52	22.54	23.01	23.58	17.24	17.73	17.75	18.22	18.78