

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: P1055208

Luminaire Tested: S122R3DR-S485D850-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055208  
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-S485D850-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

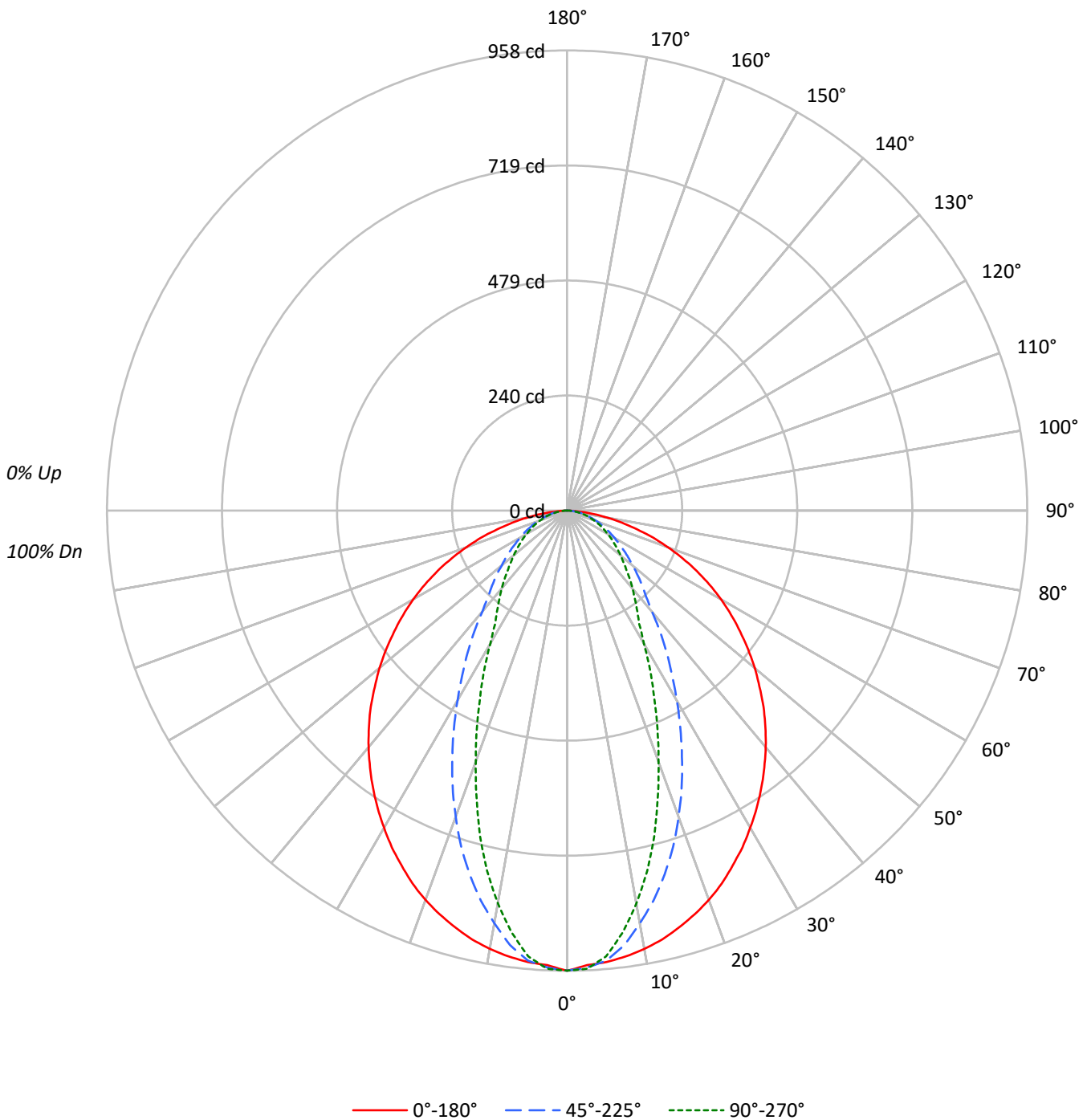
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1448.7 lumens  
Efficiency: N/A  
Efficacy: 75.9 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): 19.1  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	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°	18146	18146	18146
5°	17942	17881	17714
10°	17826	16778	15977
15°	17625	15378	13744
20°	17390	13676	11222
25°	17043	11819	8958
30°	16679	9987	6990
35°	16301	8354	5872
40°	15905	6774	5228
45°	15492	5921	4678
50°	15035	5241	4274
55°	14524	4737	3967
60°	14020	4308	3702
65°	13355	3949	3483
70°	12375	3684	3285
75°	10966	3338	3104
80°	9350	3142	2880
85°	6434	2782	2609

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 15492 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.8	6.1
10°-20°	221.6	15.3
20°-30°	273.1	18.8
30°-40°	262.0	18.1
40°-50°	226.0	15.6
50°-60°	175.3	12.1
60°-70°	120.0	8.3
70°-80°	65.2	4.5
80°-90°	17.8	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°	582.4	40.2
0°-40°	844.4	58.3
0°-60°	1245.7	86.0
0°-90°	1448.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1448.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	958	958	958	958	958	
5°	943	957	940	928	931	90
15°	899	871	784	720	701	253
25°	815	728	565	461	428	376
35°	705	559	361	269	254	441
45°	578	389	221	183	175	446
55°	440	234	143	124	120	394
65°	298	127	88	80	78	294
75°	150	58	46	43	42	160
85°	30	14	13	13	12	38
90°	0	0	0	0	0	



TEST NUMBER: P105208

CATALOG NUMBER: S122R3DR-S485D850-X4F0-XX-UDD-F-W

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	957.8	957.8	957.8	957.8	957.8
2.5°	947.4	963.4	952.2	952.2	954.6
5°	943.4	957.0	940.2	928.2	931.4
7.5°	936.2	945.8	912.2	886.5	885.7
10°	926.6	927.4	872.1	838.5	830.5
12.5°	914.6	901.8	831.3	780.8	768.8
15°	898.6	871.3	784.0	720.0	700.7
17.5°	881.7	840.1	733.6	653.5	627.1
20°	862.5	802.5	678.3	587.0	556.6
22.5°	840.9	766.4	623.1	523.0	490.9
25°	815.3	728.0	565.4	461.3	428.5
27.5°	790.4	688.7	510.1	406.8	373.2
30°	762.4	646.3	456.5	354.8	319.5
32.5°	734.4	603.0	406.8	305.1	278.7
35°	704.8	559.0	361.2	269.1	253.9
37.5°	674.3	515.8	317.9	245.1	231.4
40°	643.1	472.5	273.9	221.8	211.4
42.5°	611.1	430.1	243.5	202.6	193.0
45°	578.2	389.2	221.0	182.6	174.6
47.5°	543.0	348.4	199.4	165.8	158.6
50°	510.1	309.1	177.8	150.6	145.0
52.5°	474.9	270.7	160.2	136.9	132.1
55°	439.7	233.9	143.4	124.1	120.1
57.5°	405.2	198.6	127.3	112.1	108.9
60°	370.0	170.6	113.7	100.9	97.7
62.5°	334.0	148.2	100.9	90.5	87.3
65°	297.9	127.3	88.1	80.1	77.7
67.5°	260.3	107.3	76.9	70.5	68.9
70°	223.4	89.7	66.5	60.9	59.3
72.5°	187.4	72.9	56.1	52.1	50.5
75°	149.8	58.5	45.6	43.2	42.4
77.5°	116.9	45.6	36.8	35.2	34.4
80°	85.7	33.6	28.8	27.2	26.4
82.5°	56.9	23.2	20.8	20.0	19.2
85°	29.6	14.4	12.8	12.8	12.0
87.5°	9.6	6.4	6.4	6.4	5.6
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	19.68	21.15	20.04	21.46	21.78	14.48	15.95	14.85	16.27	16.58
	3H	22.01	23.33	22.39	23.65	24.02	16.13	17.45	16.51	17.78	18.14
	4H	22.90	24.14	23.31	24.49	24.87	16.77	18.00	17.17	18.35	18.73
	6H	23.57	24.71	23.98	25.07	25.47	17.26	18.40	17.67	18.77	19.16
	8H	23.77	24.86	24.20	25.25	25.65	17.43	18.51	17.86	18.90	19.31
	12H	23.89	24.93	24.32	25.31	25.74	17.55	18.58	17.98	18.97	19.40
4H	2H	19.70	20.93	20.10	21.28	21.66	15.20	16.43	15.60	16.78	17.16
	3H	22.11	23.13	22.52	23.53	23.93	17.05	18.07	17.46	18.48	18.88
	4H	23.04	23.96	23.47	24.38	24.82	17.80	18.72	18.23	19.13	19.57
	6H	23.82	24.62	24.27	25.06	25.52	18.41	19.21	18.87	19.65	20.12
	8H	24.09	24.84	24.55	25.28	25.75	18.62	19.37	19.09	19.82	20.29
	12H	24.26	24.93	24.75	25.41	25.88	18.79	19.45	19.27	19.93	20.41
8H	4H	23.03	23.78	23.50	24.22	24.69	18.17	18.92	18.64	19.37	19.84
	6H	23.84	24.46	24.34	24.95	25.43	18.91	19.53	19.41	20.02	20.50
	8H	24.14	24.69	24.65	25.20	25.69	19.20	19.76	19.72	20.27	20.76
	12H	24.37	24.86	24.88	25.35	25.92	19.45	19.94	19.96	20.43	21.00
12H	4H	23.01	23.68	23.49	24.16	24.63	18.23	18.90	18.71	19.38	19.85
	6H	23.81	24.37	24.33	24.88	25.37	19.00	19.55	19.51	20.06	20.55
	8H	24.15	24.64	24.66	25.13	25.70	19.35	19.84	19.86	20.33	20.90