

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: P1055339

Luminaire Tested: S122R3DR-H485D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055339
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-3)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122R3DR-H485D840-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

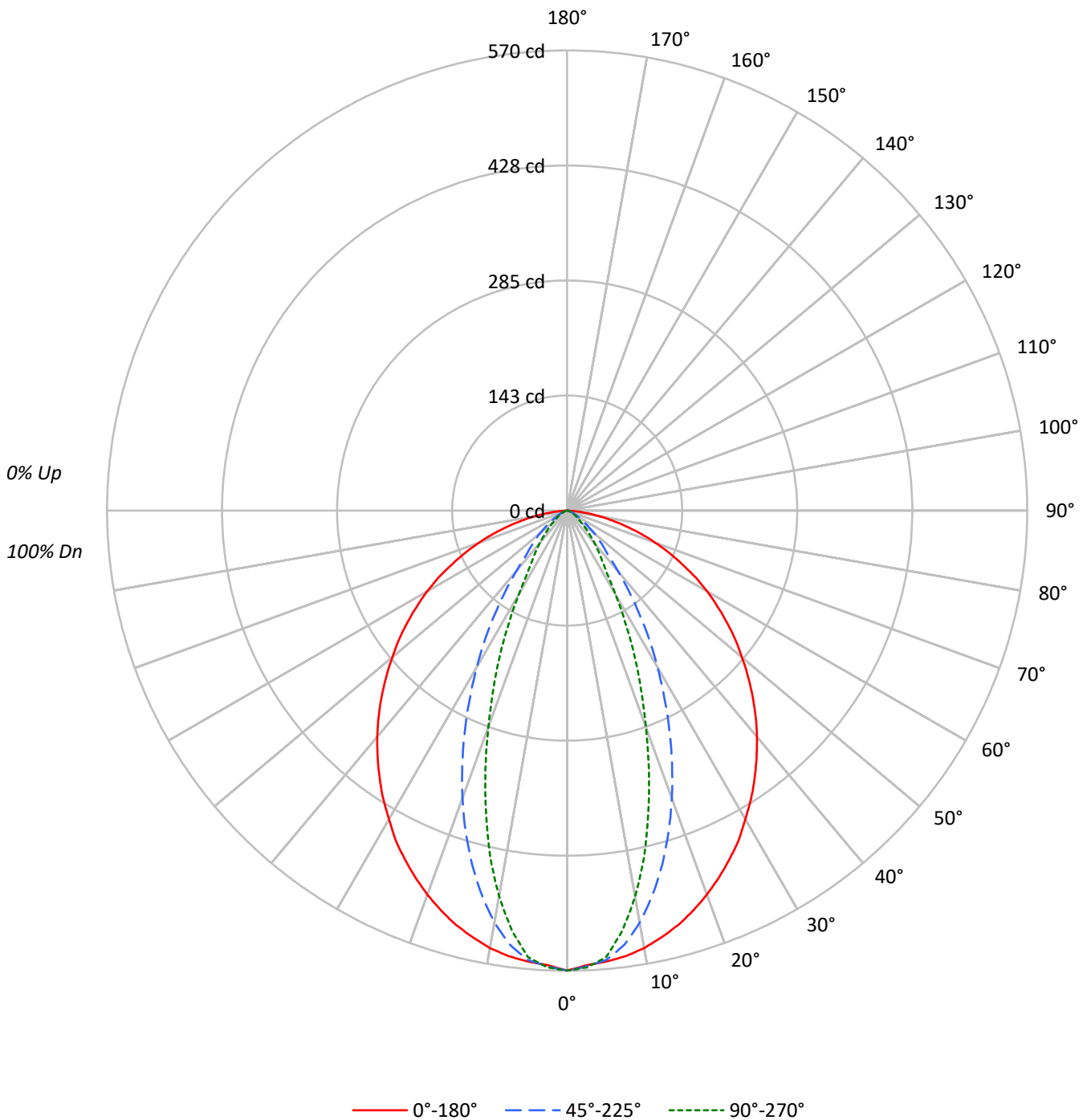
Lumens per Lamp: N/A
Luminaire Lumens: 653.0 lumens
Efficiency: N/A
Efficacy: 37.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (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	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71					71			
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64					64			
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58					58			
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53					53			
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49					49			
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45					45			
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42					42			
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39					39			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10795	10795	10795
5°	10664	10624	10557
10°	10585	9967	9336
15°	10423	8917	7614
20°	10206	7645	5744
25°	9955	6263	4101
30°	9654	4887	2612
35°	9367	3585	1744
40°	9049	2419	1313
45°	8700	1701	935
50°	8335	1297	657
55°	7980	898	486
60°	7593	610	398
65°	7043	439	314
70°	6420	349	271
75°	5571	307	205
80°	4419	229	229
85°	2435	304	152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8700 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.1	8.0
10°-20°	127.9	19.6
20°-30°	146.1	22.4
30°-40°	123.9	19.0
40°-50°	92.4	14.2
50°-60°	59.7	9.1
60°-70°	33.3	5.1
70°-80°	14.6	2.2
80°-90°	3.0	0.5
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°	326.0	49.9
0°-40°	449.9	68.9
0°-60°	602.1	92.2
0°-90°	653.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	653.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	570	570	570	570	570	
5°	561	568	559	553	555	53
15°	531	518	455	406	388	150
25°	476	420	300	219	196	219
35°	405	305	155	84	75	253
45°	325	193	64	41	35	250
55°	242	92	27	17	15	216
65°	157	34	10	8	7	156
75°	76	7	4	4	3	81
85°	11	1	1	1	1	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	569.8	569.8	569.8	569.8	569.8
2.5°	563.5	571.9	564.9	564.9	566.3
5°	560.7	567.7	558.6	553.0	555.1
7.5°	556.5	561.4	542.6	525.8	524.4
10°	550.2	552.3	518.1	492.3	485.3
12.5°	541.2	536.3	488.1	451.8	439.9
15°	531.4	518.1	454.6	406.4	388.2
17.5°	519.5	495.8	417.6	358.9	336.6
20°	506.2	472.7	379.2	309.3	284.9
22.5°	491.6	446.9	339.4	262.6	238.1
25°	476.2	420.4	299.6	219.3	196.2
27.5°	460.2	392.4	260.5	180.2	155.0
30°	441.3	363.8	223.4	142.4	119.4
32.5°	423.9	333.8	189.2	110.3	90.8
35°	405.0	305.1	155.0	84.5	75.4
37.5°	385.4	276.5	125.0	71.2	63.5
40°	365.9	247.9	97.8	60.1	53.1
42.5°	345.6	220.0	75.4	50.3	43.3
45°	324.7	192.7	63.5	41.2	34.9
47.5°	303.7	165.5	53.1	32.8	27.9
50°	282.8	139.7	44.0	25.8	22.3
52.5°	262.6	115.2	34.9	20.9	18.2
55°	241.6	91.5	27.2	16.8	14.7
57.5°	220.7	71.2	20.9	14.0	12.6
60°	200.4	53.8	16.1	11.2	10.5
62.5°	179.5	43.3	12.6	9.1	8.4
65°	157.1	33.5	9.8	7.7	7.0
67.5°	136.9	24.4	7.7	6.3	5.6
70°	115.9	16.8	6.3	5.6	4.9
72.5°	95.7	10.5	4.9	4.2	4.2
75°	76.1	7.0	4.2	3.5	2.8
77.5°	58.0	4.2	2.8	2.8	2.1
80°	40.5	2.8	2.1	2.1	2.1
82.5°	25.1	2.1	1.4	1.4	1.4
85°	11.2	0.7	1.4	0.7	0.7
87.5°	2.1	0.7	0.7	0.7	0.7
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	16.52	17.84	16.88	18.15	18.46	2.84	4.16	3.21	4.48	4.79
	3H	18.99	20.16	19.37	20.49	20.85	3.69	4.87	4.07	5.20	5.56
	4H	19.94	21.04	20.35	21.39	21.77	3.97	5.06	4.37	5.41	5.79
	6H	20.63	21.63	21.05	22.01	22.40	4.16	5.16	4.58	5.53	5.93
	8H	20.83	21.78	21.26	22.17	22.57	4.23	5.19	4.67	5.58	5.98
	12H	20.91	21.82	21.34	22.20	22.63	4.26	5.17	4.69	5.55	5.98
4H	2H	16.30	17.39	16.70	17.74	18.13	3.42	4.51	3.82	4.86	5.24
	3H	18.79	19.68	19.20	20.09	20.49	4.45	5.34	4.86	5.75	6.15
	4H	19.73	20.53	20.16	20.95	21.39	4.82	5.62	5.25	6.04	6.48
	6H	20.49	21.18	20.95	21.62	22.09	5.11	5.80	5.57	6.24	6.71
	8H	20.73	21.37	21.20	21.82	22.29	5.21	5.85	5.68	6.30	6.77
	12H	20.86	21.43	21.34	21.91	22.38	5.25	5.82	5.74	6.30	6.78
8H	4H	19.60	20.24	20.07	20.69	21.16	5.19	5.83	5.66	6.28	6.75
	6H	20.34	20.86	20.84	21.36	21.84	5.55	6.07	6.05	6.57	7.05
	8H	20.58	21.05	21.10	21.57	22.06	5.69	6.16	6.21	6.67	7.16
	12H	20.73	21.15	21.25	21.64	22.21	5.77	6.18	6.29	6.68	7.25
12H	4H	19.55	20.12	20.04	20.60	21.08	5.31	5.88	5.79	6.36	6.83
	6H	20.28	20.75	20.80	21.26	21.75	5.67	6.14	6.19	6.65	7.15
	8H	20.54	20.95	21.06	21.45	22.02	5.85	6.26	6.36	6.76	7.33