

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: P1055204

Luminaire Tested: S122R3DR-S485D840-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055204
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-S485D840-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

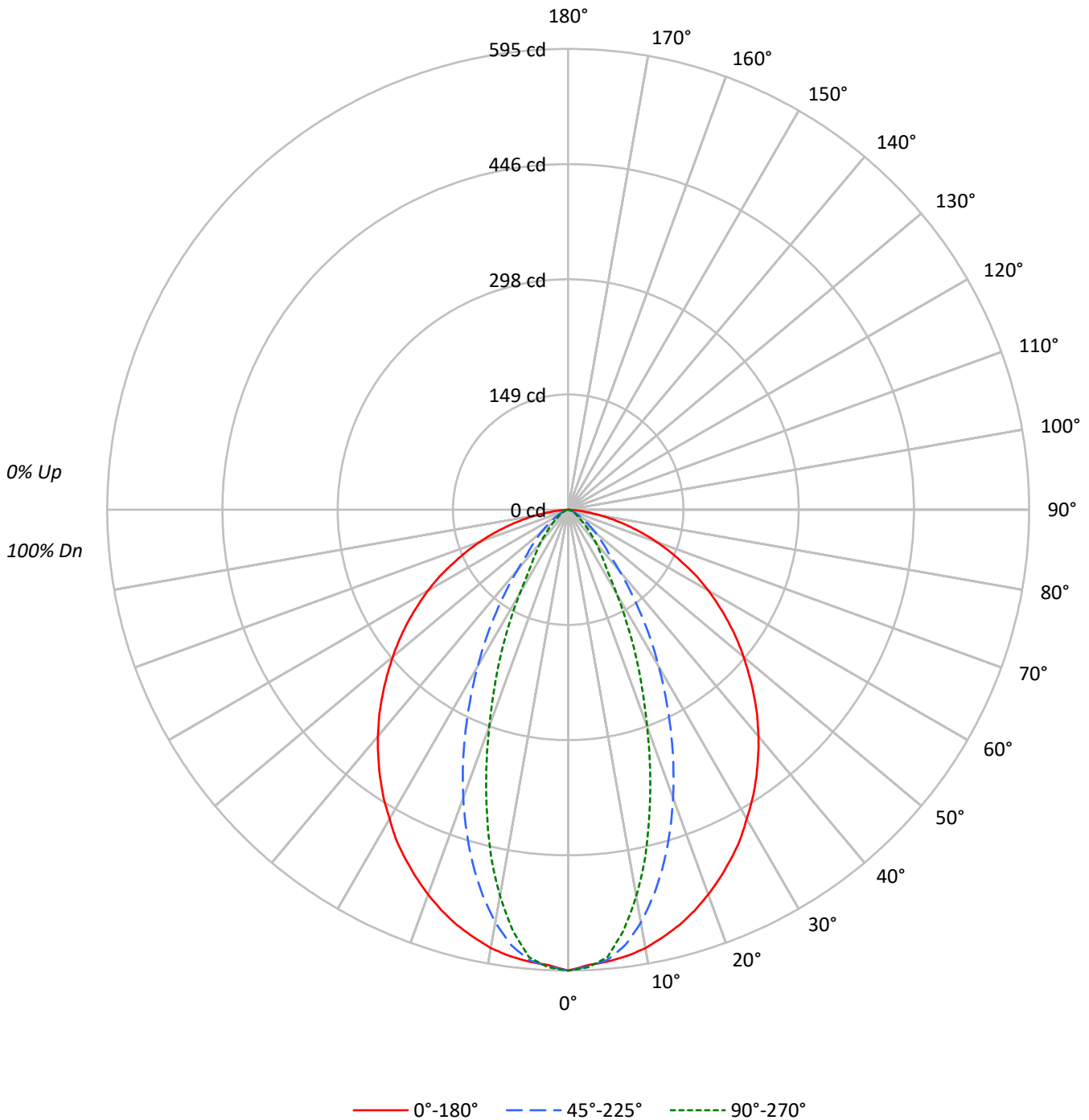
Lumens per Lamp: N/A
Luminaire Lumens: 682.0 lumens
Efficiency: N/A
Efficacy: 35.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
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

TEST NUMBER: P1055204

CATALOG NUMBER: S122R3DR-S485D840-X4F0-XX-UDD-F-S

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°	11275	11275	11275
5°	11137	11095	11027
10°	11056	10410	9750
15°	10886	9313	7954
20°	10660	7984	5998
25°	10398	6541	4283
30°	10083	5106	2728
35°	9783	3745	1823
40°	9450	2525	1370
45°	9086	1779	978
50°	8707	1353	687
55°	8334	938	505
60°	7931	637	413
65°	7357	457	327
70°	6708	366	283
75°	5819	322	212
80°	4615	240	240
85°	2543	326	152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9086 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	8.0
10°-20°	133.5	19.6
20°-30°	152.6	22.4
30°-40°	129.4	19.0
40°-50°	96.5	14.2
50°-60°	62.4	9.1
60°-70°	34.8	5.1
70°-80°	15.3	2.2
80°-90°	3.2	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°	340.5	49.9
0°-40°	469.9	68.9
0°-60°	628.8	92.2
0°-90°	682.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	682.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	595	595	595	595	595	
5°	586	593	583	578	580	56
15°	555	541	475	424	406	156
25°	497	439	313	229	205	229
35°	423	319	162	88	79	264
45°	339	201	66	43	36	262
55°	252	96	28	18	15	226
65°	164	35	10	8	7	163
75°	80	7	4	4	3	85
85°	12	1	2	1	1	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	595.1	595.1	595.1	595.1	595.1
2.5°	588.5	597.3	590.0	590.0	591.4
5°	585.6	592.9	583.4	577.6	579.8
7.5°	581.2	586.3	566.6	549.1	547.7
10°	574.7	576.9	541.1	514.1	506.8
12.5°	565.2	560.1	509.8	471.8	459.4
15°	555.0	541.1	474.8	424.4	405.5
17.5°	542.6	517.8	436.1	374.8	351.5
20°	528.7	493.7	396.0	323.1	297.5
22.5°	513.4	466.7	354.4	274.2	248.7
25°	497.4	439.0	312.9	229.0	204.9
27.5°	480.6	409.8	272.0	188.2	161.9
30°	460.9	379.9	233.4	148.8	124.7
32.5°	442.7	348.6	197.6	115.2	94.8
35°	423.0	318.7	161.9	88.2	78.8
37.5°	402.6	288.8	130.5	74.4	66.4
40°	382.1	258.9	102.1	62.7	55.4
42.5°	361.0	229.7	78.8	52.5	45.2
45°	339.1	201.3	66.4	43.0	36.5
47.5°	317.2	172.8	55.4	34.3	29.2
50°	295.4	145.9	45.9	27.0	23.3
52.5°	274.2	120.3	36.5	21.9	19.0
55°	252.3	95.5	28.4	17.5	15.3
57.5°	230.4	74.4	21.9	14.6	13.1
60°	209.3	56.2	16.8	11.7	10.9
62.5°	187.4	45.2	13.1	9.5	8.8
65°	164.1	35.0	10.2	8.0	7.3
67.5°	142.9	25.5	8.0	6.6	5.8
70°	121.1	17.5	6.6	5.8	5.1
72.5°	99.9	10.9	5.1	4.4	4.4
75°	79.5	7.3	4.4	3.6	2.9
77.5°	60.5	4.4	2.9	2.9	2.2
80°	42.3	2.9	2.2	2.2	2.2
82.5°	26.3	2.2	1.5	1.5	1.5
85°	11.7	0.7	1.5	0.7	0.7
87.5°	2.2	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	16.67	17.99	17.03	18.30	18.62	2.98	4.30	3.35	4.61	4.93
	3H	19.14	20.31	19.52	20.64	21.00	3.83	5.00	4.21	5.33	5.70
	4H	20.09	21.19	20.50	21.54	21.92	4.10	5.19	4.50	5.54	5.93
	6H	20.78	21.78	21.20	22.15	22.55	4.29	5.30	4.71	5.67	6.06
	8H	20.98	21.93	21.41	22.32	22.72	4.37	5.32	4.80	5.72	6.12
	12H	21.06	21.97	21.49	22.35	22.78	4.40	5.31	4.83	5.69	6.12
4H	2H	16.45	17.55	16.86	17.90	18.28	3.55	4.64	3.95	4.99	5.38
	3H	18.94	19.83	19.35	20.24	20.64	4.58	5.48	4.99	5.88	6.28
	4H	19.88	20.68	20.32	21.10	21.54	4.94	5.74	5.38	6.16	6.61
	6H	20.64	21.33	21.10	21.77	22.24	5.24	5.93	5.70	6.37	6.84
	8H	20.88	21.52	21.35	21.97	22.44	5.34	5.99	5.81	6.43	6.91
	12H	21.01	21.58	21.49	22.06	22.53	5.39	5.96	5.87	6.44	6.91
8H	4H	19.75	20.39	20.22	20.84	21.31	5.32	5.96	5.79	6.41	6.88
	6H	20.49	21.01	20.99	21.51	21.99	5.68	6.20	6.18	6.70	7.18
	8H	20.73	21.20	21.25	21.72	22.21	5.83	6.30	6.35	6.81	7.31
	12H	20.88	21.30	21.40	21.79	22.36	5.91	6.32	6.42	6.82	7.39
12H	4H	19.70	20.27	20.19	20.75	21.23	5.44	6.01	5.92	6.49	6.96
	6H	20.43	20.90	20.95	21.41	21.90	5.80	6.27	6.32	6.79	7.28
	8H	20.69	21.10	21.21	21.60	22.17	5.99	6.40	6.50	6.90	7.47