

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: P1055206

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055206
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-2)
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-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

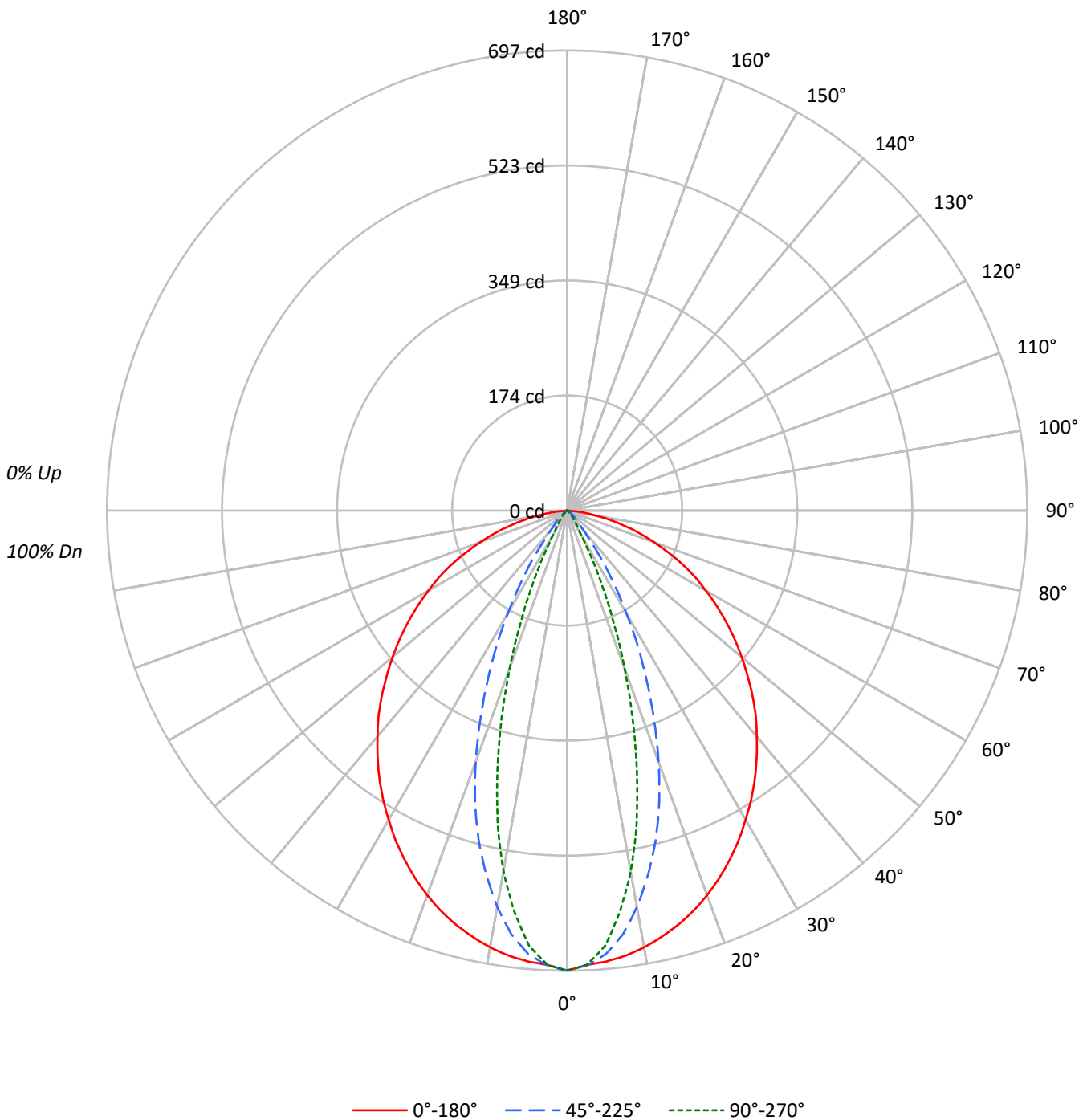
Lumens per Lamp: N/A
Luminaire Lumens: 633.9 lumens
Efficiency: N/A
Efficacy: 33.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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	112	109	106	103	110	106	104	101	102	100	98	99	97	95	95	94	92	91				91
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	81				81
3	98	91	85	80	96	89	84	79	86	82	78	84	80	77	82	78	75	74				74
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67				67
5	87	77	70	65	85	76	70	65	74	69	64	72	68	64	71	66	63	61				61
6	82	72	65	60	80	71	64	59	69	63	59	68	62	59	66	62	58	56				56
7	77	67	60	55	76	66	59	55	65	59	55	63	58	54	62	57	54	52				52
8	73	62	56	51	72	62	55	51	61	55	51	60	54	50	59	54	50	49				49
9	70	59	52	48	68	58	52	47	57	51	47	56	51	47	55	50	47	45				45
10	66	55	49	45	65	55	49	44	54	48	44	53	48	44	52	48	44	43				43

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13200	13200	13200
5°	13037	12824	12581
10°	12926	11726	10677
15°	12739	10148	7995
20°	12498	8153	5119
25°	12187	5977	2628
30°	11827	3907	858
35°	11465	2167	500
40°	11053	871	277
45°	10642	579	107
50°	10175	330	47
55°	9708	159	26
60°	9196	61	0
65°	8652	36	0
70°	7766	44	0
75°	6683	59	0
80°	5062	0	0
85°	2087	174	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10642 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.5	9.9
10°-20°	145.1	22.9
20°-30°	147.3	23.2
30°-40°	110.6	17.4
40°-50°	77.4	12.2
50°-60°	47.4	7.5
60°-70°	28.2	4.5
70°-80°	13.0	2.1
80°-90°	2.3	0.4
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°	354.9	56.0
0°-40°	465.5	73.4
0°-60°	590.3	93.1
0°-90°	633.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	633.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	697	697	697	697	697	
5°	686	692	674	662	662	65
15°	650	614	517	438	408	183
25°	583	480	286	163	126	268
35°	496	323	94	28	22	310
45°	397	171	22	6	4	306
55°	294	52	5	2	1	263
65°	193	15	1	1	0	190
75°	91	2	1	1	0	97
85°	10	0	1	1	0	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	696.7	696.7	696.7	696.7	696.7
2.5°	688.7	699.2	689.5	687.9	688.7
5°	685.5	691.9	674.3	661.5	661.5
7.5°	679.9	679.9	647.1	620.7	612.7
10°	671.9	663.1	609.5	567.0	555.0
12.5°	661.5	640.7	565.4	505.3	486.1
15°	649.5	614.3	517.4	438.1	407.6
17.5°	635.9	584.6	463.7	365.2	330.0
20°	619.9	552.6	404.4	290.7	253.9
22.5°	602.2	517.4	344.4	224.2	185.0
25°	583.0	480.5	285.9	163.4	125.7
27.5°	563.0	442.1	232.2	112.1	76.9
30°	540.6	402.0	178.6	66.5	39.2
32.5°	519.0	363.6	133.7	36.0	28.8
35°	495.7	322.7	93.7	28.0	21.6
37.5°	471.7	284.3	57.7	20.8	16.0
40°	446.9	245.1	35.2	15.2	11.2
42.5°	422.9	208.2	28.0	10.4	7.2
45°	397.2	170.6	21.6	6.4	4.0
47.5°	370.8	136.1	16.0	4.0	2.4
50°	345.2	105.7	11.2	2.4	1.6
52.5°	319.5	77.7	7.2	1.6	0.8
55°	293.9	52.1	4.8	1.6	0.8
57.5°	268.3	36.8	3.2	0.8	0.8
60°	242.7	28.8	1.6	0.8	0.0
62.5°	218.6	22.4	1.6	0.8	0.8
65°	193.0	15.2	0.8	0.8	0.0
67.5°	165.8	9.6	0.8	0.8	0.0
70°	140.2	5.6	0.8	0.8	0.0
72.5°	115.3	3.2	0.8	0.8	0.0
75°	91.3	1.6	0.8	0.8	0.0
77.5°	68.1	0.8	0.0	0.8	0.0
80°	46.4	0.0	0.0	0.8	0.0
82.5°	27.2	0.0	0.0	0.8	0.0
85°	9.6	0.0	0.8	0.8	0.0
87.5°	0.0	0.0	0.8	0.8	0.0
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	15.17	16.43	15.54	16.75	17.06	0.00	0.00	0.00	0.00	0.00
	3H	18.92	20.04	19.30	20.37	20.73	0.00	0.00	0.00	0.00	0.00
	4H	20.23	21.27	20.63	21.62	22.00	0.00	0.00	0.00	0.00	0.00
	6H	21.08	22.04	21.50	22.41	22.80	0.00	0.00	0.00	0.00	0.00
	8H	21.30	22.20	21.73	22.59	23.00	0.00	0.00	0.00	0.00	0.00
	12H	21.36	22.22	21.79	22.61	23.04	0.00	0.00	0.00	0.00	0.00
4H	2H	14.93	15.97	15.33	16.32	16.70	0.00	0.00	0.00	0.00	0.00
	3H	18.67	19.52	19.08	19.93	20.33	0.00	0.00	0.00	0.00	0.00
	4H	19.97	20.73	20.40	21.15	21.59	0.00	0.00	0.00	0.00	0.00
	6H	20.89	21.54	21.35	21.99	22.46	0.00	0.00	0.00	0.00	0.00
	8H	21.14	21.76	21.61	22.20	22.68	0.00	0.00	0.00	0.00	0.00
	12H	21.25	21.78	21.73	22.27	22.74	0.00	0.00	0.00	0.00	0.00
8H	4H	19.82	20.43	20.29	20.88	21.35	0.00	0.00	0.00	0.00	0.00
	6H	20.72	21.22	21.23	21.72	22.20	0.00	0.00	0.00	0.00	0.00
	8H	20.98	21.42	21.50	21.94	22.43	0.00	0.00	0.00	0.00	0.00
	12H	21.10	21.49	21.61	21.98	22.56	0.00	0.00	0.00	0.00	0.00
12H	4H	19.77	20.31	20.26	20.80	21.27	0.00	0.00	0.00	0.00	0.00
	6H	20.66	21.10	21.18	21.62	22.11	0.00	0.00	0.00	0.00	0.00
	8H	20.94	21.32	21.45	21.82	22.39	0.00	0.00	0.00	0.00	0.00