

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055356

Luminaire Tested: S122R3DR-H485D950-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055356
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-H485D950-X4F0-XX-UDD-FLL-B
Description: DEFINE 2, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

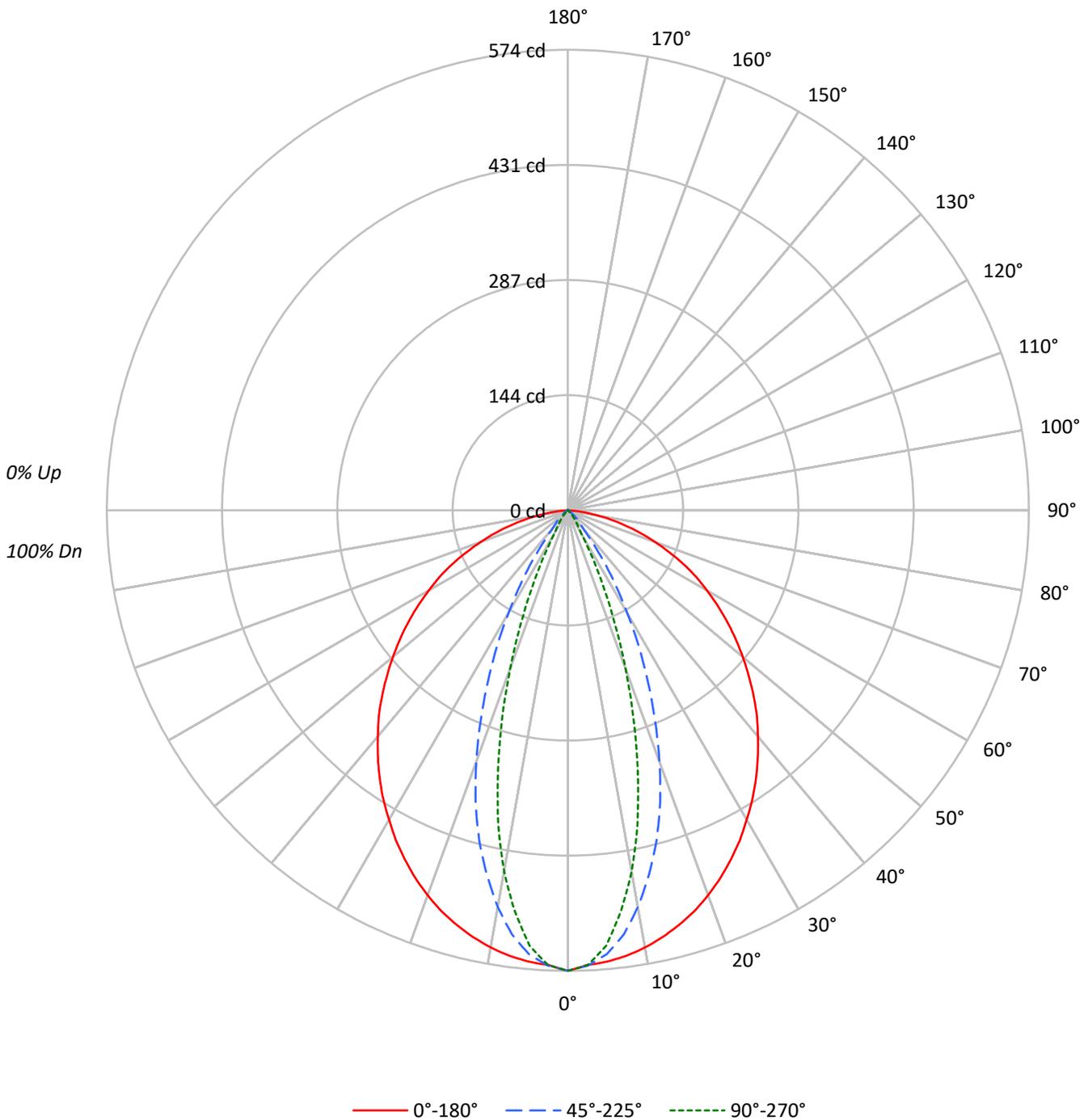
Lumens per Lamp: N/A
Luminaire Lumens: 522.2 lumens
Efficiency: N/A
Efficacy: 30.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.56 / 0.7
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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	47	44	43					43			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10873	10873	10873
5°	10740	10563	10363
10°	10646	9658	8794
15°	10494	8358	6586
20°	10295	6716	4216
25°	10038	4923	2166
30°	9742	3218	707
35°	9443	1786	412
40°	9104	717	228
45°	8767	477	88
50°	8380	271	38
55°	7997	132	23
60°	7575	49	0
65°	7128	31	0
70°	6392	39	0
75°	5505	51	0
80°	4179	0	0
85°	1717	152	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8767 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.5	9.9
10°-20°	119.5	22.9
20°-30°	121.4	23.2
30°-40°	91.1	17.4
40°-50°	63.8	12.2
50°-60°	39.0	7.5
60°-70°	23.3	4.5
70°-80°	10.7	2.1
80°-90°	1.9	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°	292.4	56.0
0°-40°	383.4	73.4
0°-60°	486.2	93.1
0°-90°	522.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	522.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	565	570	555	545	545	54
15°	535	506	426	361	336	151
25°	480	396	236	135	104	221
35°	408	266	77	23	18	255
45°	327	140	18	5	3	252
55°	242	43	4	1	1	216
65°	159	12	1	1	0	157
75°	75	1	1	1	0	80
85°	8	0	1	1	0	13
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	573.9	573.9	573.9	573.9	573.9
2.5°	567.3	575.9	568.0	566.6	567.3
5°	564.7	569.9	555.4	544.9	544.9
7.5°	560.0	560.0	533.0	511.2	504.6
10°	553.4	546.2	502.0	467.0	457.1
12.5°	544.9	527.7	465.7	416.2	400.4
15°	535.0	505.9	426.1	360.8	335.8
17.5°	523.8	481.5	381.9	300.8	271.8
20°	510.6	455.2	333.1	239.5	209.1
22.5°	496.1	426.1	283.6	184.7	152.4
25°	480.2	395.8	235.5	134.6	103.6
27.5°	463.7	364.1	191.3	92.4	63.3
30°	445.3	331.1	147.1	54.8	32.3
32.5°	427.5	299.5	110.2	29.7	23.7
35°	408.3	265.8	77.2	23.1	17.8
37.5°	388.5	234.2	47.5	17.2	13.2
40°	368.1	201.9	29.0	12.5	9.2
42.5°	348.3	171.5	23.1	8.6	5.9
45°	327.2	140.5	17.8	5.3	3.3
47.5°	305.4	112.1	13.2	3.3	2.0
50°	284.3	87.1	9.2	2.0	1.3
52.5°	263.2	64.0	5.9	1.3	0.7
55°	242.1	42.9	4.0	1.3	0.7
57.5°	221.0	30.3	2.6	0.7	0.7
60°	199.9	23.7	1.3	0.7	0.0
62.5°	180.1	18.5	1.3	0.7	0.7
65°	159.0	12.5	0.7	0.7	0.0
67.5°	136.5	7.9	0.7	0.7	0.0
70°	115.4	4.6	0.7	0.7	0.0
72.5°	95.0	2.6	0.7	0.7	0.0
75°	75.2	1.3	0.7	0.7	0.0
77.5°	56.1	0.7	0.0	0.7	0.0
80°	38.3	0.0	0.0	0.7	0.0
82.5°	22.4	0.0	0.0	0.7	0.0
85°	7.9	0.0	0.7	0.7	0.0
87.5°	0.0	0.0	0.7	0.7	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	14.50	15.76	14.86	16.07	16.39	0.00	0.00	0.00	0.00	0.00
	3H	18.24	19.36	18.62	19.69	20.05	0.00	0.00	0.00	0.00	0.00
	4H	19.55	20.59	19.95	20.94	21.33	0.00	0.00	0.00	0.00	0.00
	6H	20.41	21.36	20.82	21.73	22.13	0.00	0.00	0.00	0.00	0.00
	8H	20.62	21.53	21.05	21.92	22.32	0.00	0.00	0.00	0.00	0.00
	12H	20.69	21.55	21.12	21.93	22.36	0.00	0.00	0.00	0.00	0.00
4H	2H	14.25	15.29	14.66	15.64	16.03	0.00	0.00	0.00	0.00	0.00
	3H	17.99	18.85	18.41	19.25	19.66	0.00	0.00	0.00	0.00	0.00
	4H	19.29	20.05	19.73	20.47	20.92	0.00	0.00	0.00	0.00	0.00
	6H	20.21	20.87	20.68	21.31	21.78	0.00	0.00	0.00	0.00	0.00
	8H	20.47	21.08	20.94	21.53	22.00	0.00	0.00	0.00	0.00	0.00
	12H	20.57	21.11	21.06	21.59	22.07	0.00	0.00	0.00	0.00	0.00
8H	4H	19.15	19.76	19.62	20.21	20.68	0.00	0.00	0.00	0.00	0.00
	6H	20.05	20.55	20.55	21.04	21.52	0.00	0.00	0.00	0.00	0.00
	8H	20.31	20.75	20.83	21.27	21.76	0.00	0.00	0.00	0.00	0.00
	12H	20.42	20.81	20.94	21.31	21.88	0.00	0.00	0.00	0.00	0.00
12H	4H	19.10	19.64	19.58	20.12	20.59	0.00	0.00	0.00	0.00	0.00
	6H	19.99	20.43	20.51	20.95	21.44	0.00	0.00	0.00	0.00	0.00
	8H	20.26	20.65	20.78	21.15	21.72	0.00	0.00	0.00	0.00	0.00