

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: P1055357

Luminaire Tested: S122R3DR-H485D950-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055357
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-H485D950-X4F0-XX-UDD-F-S
Description: DEFINE 2, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

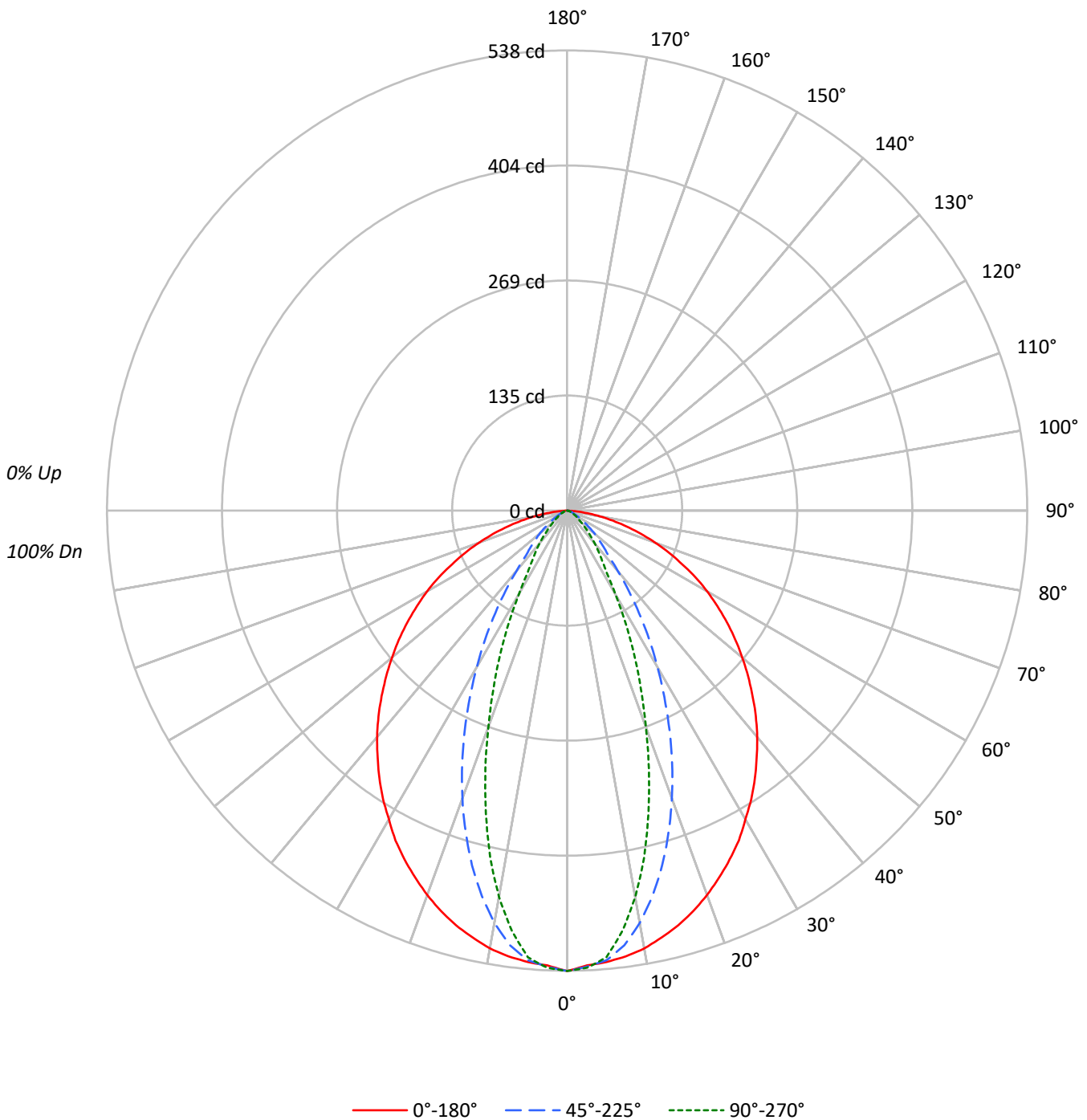
Lumens per Lamp: N/A
Luminaire Lumens: 616.9 lumens
Efficiency: N/A
Efficacy: 35.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.64 / 0.81
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	83	78	95	88	82	77	85	80	76	82	78	74	80	76	73	71
4	91	81	74	69	89	80	74	69	78	72	68	76	71	67	74	70	66	64
5	85	75	67	62	83	74	67	62	72	66	61	70	65	61	68	64	60	58
6	80	69	62	56	78	68	61	56	66	60	56	65	59	55	63	59	55	53
7	75	64	57	52	74	63	56	51	62	56	51	60	55	51	59	54	50	49
8	71	59	52	47	69	59	52	47	58	51	47	56	51	47	55	50	47	45
9	67	56	49	44	66	55	48	44	54	48	44	53	47	43	52	47	43	42
10	63	52	45	41	62	52	45	41	51	45	41	50	44	40	49	44	40	39

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10199	10199	10199
5°	10074	10036	9973
10°	10000	9417	8821
15°	9846	8422	7194
20°	9641	7222	5426
25°	9405	5916	3876
30°	9120	4618	2468
35°	8849	3386	1647
40°	8550	2285	1239
45°	8218	1608	884
50°	7876	1226	622
55°	7538	849	459
60°	7173	576	375
65°	6653	412	296
70°	6066	327	255
75°	5263	293	190
80°	4179	218	218
85°	2304	283	152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8218 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.2	8.0
10°-20°	120.8	19.6
20°-30°	138.0	22.4
30°-40°	117.0	19.0
40°-50°	87.3	14.2
50°-60°	56.4	9.1
60°-70°	31.5	5.1
70°-80°	13.8	2.2
80°-90°	2.9	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°	308.0	49.9
0°-40°	425.0	68.9
0°-60°	568.7	92.2
0°-90°	616.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	616.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	538	538	538	538	538	
5°	530	536	528	522	524	50
15°	502	490	429	384	367	141
25°	450	397	283	207	185	207
35°	383	288	146	80	71	239
45°	307	182	60	39	33	237
55°	228	86	26	16	14	204
65°	148	32	9	7	7	148
75°	72	7	4	3	3	77
85°	11	1	1	1	1	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	538.3	538.3	538.3	538.3	538.3
2.5°	532.3	540.2	533.7	533.7	535.0
5°	529.7	536.3	527.7	522.4	524.4
7.5°	525.7	530.4	512.5	496.7	495.4
10°	519.8	521.8	489.5	465.0	458.5
12.5°	511.2	506.6	461.1	426.8	415.6
15°	502.0	489.5	429.4	383.9	366.8
17.5°	490.8	468.3	394.5	339.1	317.9
20°	478.2	446.6	358.2	292.2	269.1
22.5°	464.4	422.2	320.6	248.0	224.9
25°	449.9	397.1	283.0	207.1	185.4
27.5°	434.7	370.7	246.0	170.2	146.4
30°	416.9	343.7	211.1	134.6	112.8
32.5°	400.4	315.3	178.8	104.2	85.8
35°	382.6	288.3	146.4	79.8	71.2
37.5°	364.1	261.2	118.1	67.3	60.0
40°	345.7	234.2	92.4	56.7	50.1
42.5°	326.5	207.8	71.2	47.5	40.9
45°	306.7	182.1	60.0	38.9	33.0
47.5°	286.9	156.3	50.1	31.0	26.4
50°	267.2	131.9	41.6	24.4	21.1
52.5°	248.0	108.8	33.0	19.8	17.2
55°	228.2	86.4	25.7	15.8	13.9
57.5°	208.4	67.3	19.8	13.2	11.9
60°	189.3	50.8	15.2	10.6	9.9
62.5°	169.5	40.9	11.9	8.6	7.9
65°	148.4	31.7	9.2	7.3	6.6
67.5°	129.3	23.1	7.3	5.9	5.3
70°	109.5	15.8	5.9	5.3	4.6
72.5°	90.4	9.9	4.6	4.0	4.0
75°	71.9	6.6	4.0	3.3	2.6
77.5°	54.8	4.0	2.6	2.6	2.0
80°	38.3	2.6	2.0	2.0	2.0
82.5°	23.7	2.0	1.3	1.3	1.3
85°	10.6	0.7	1.3	0.7	0.7
87.5°	2.0	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	16.32	17.64	16.69	17.95	18.27	2.64	3.96	3.00	4.27	4.58
	3H	18.79	19.96	19.17	20.29	20.66	3.48	4.66	3.86	4.99	5.35
	4H	19.75	20.84	20.15	21.19	21.57	3.76	4.85	4.16	5.20	5.58
	6H	20.43	21.44	20.85	21.81	22.20	3.95	4.95	4.37	5.33	5.72
	8H	20.63	21.58	21.06	21.97	22.38	4.02	4.98	4.45	5.37	5.77
	12H	20.71	21.62	21.14	22.00	22.43	4.05	4.96	4.48	5.34	5.77
4H	2H	16.10	17.20	16.51	17.55	17.93	3.20	4.29	3.61	4.65	5.03
	3H	18.59	19.48	19.00	19.89	20.29	4.23	5.13	4.65	5.53	5.94
	4H	19.53	20.33	19.97	20.75	21.19	4.60	5.40	5.04	5.82	6.26
	6H	20.29	20.98	20.75	21.43	21.89	4.90	5.59	5.36	6.03	6.50
	8H	20.53	21.18	21.00	21.62	22.09	4.99	5.64	5.46	6.08	6.56
	12H	20.66	21.23	21.15	21.71	22.19	5.04	5.61	5.53	6.09	6.57
8H	4H	19.40	20.04	19.87	20.49	20.96	4.97	5.62	5.44	6.06	6.53
	6H	20.14	20.66	20.64	21.16	21.64	5.33	5.86	5.84	6.36	6.84
	8H	20.38	20.85	20.91	21.37	21.86	5.47	5.94	5.99	6.46	6.95
	12H	20.53	20.95	21.05	21.44	22.02	5.56	5.98	6.08	6.47	7.04
12H	4H	19.35	19.92	19.84	20.41	20.88	5.09	5.66	5.58	6.15	6.62
	6H	20.08	20.55	20.60	21.07	21.56	5.45	5.93	5.98	6.44	6.93
	8H	20.34	20.76	20.86	21.25	21.82	5.63	6.04	6.15	6.54	7.11