

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: P1055778

Luminaire Tested: S123R3DR-H560D927-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055778
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-H560D927-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

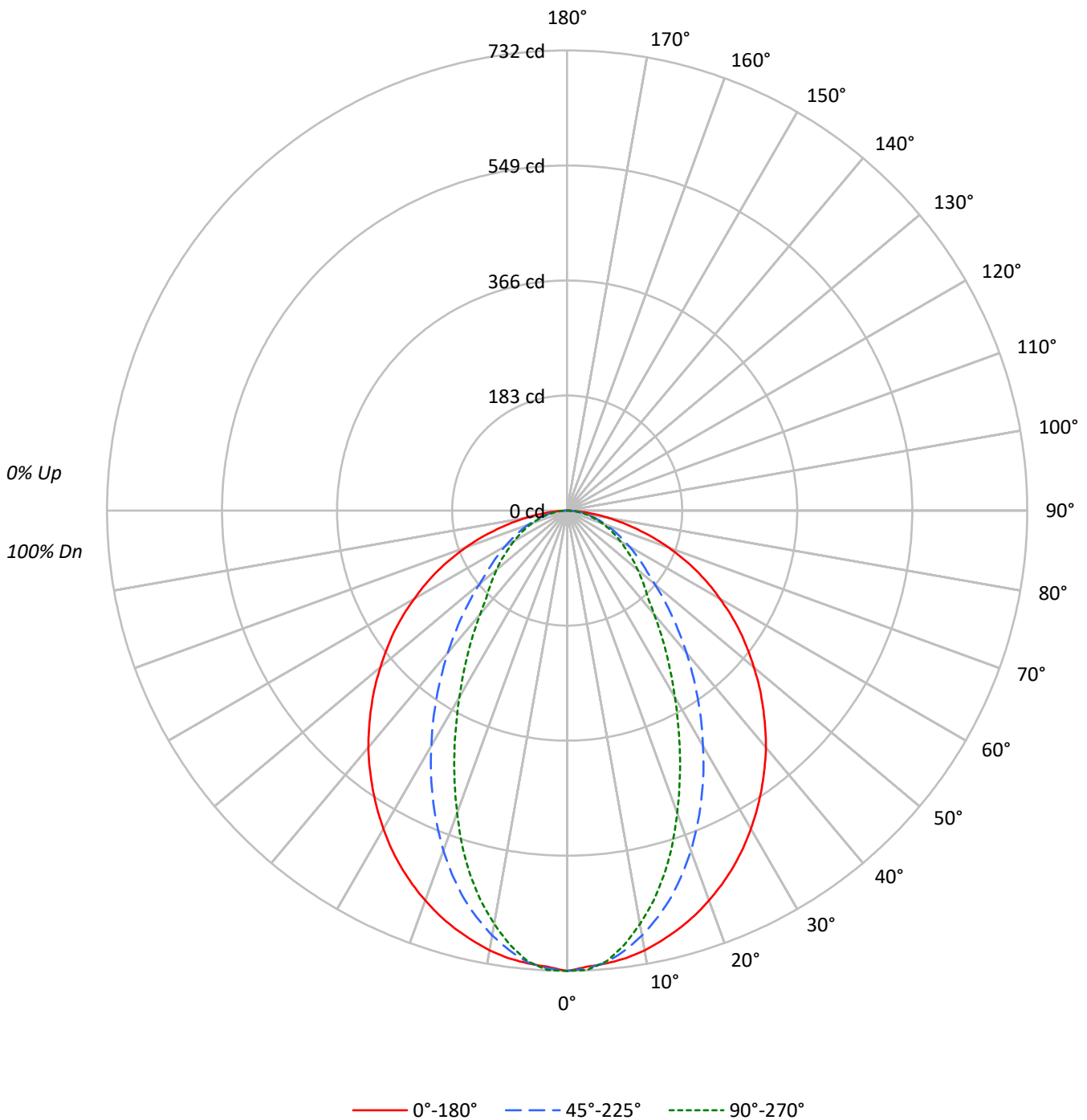
Lumens per Lamp: N/A
Luminaire Lumens: 1284.4 lumens
Efficiency: N/A
Efficacy: 74.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88					86				
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76					74				
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67					65				
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59					57				
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52					50				
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47					45				
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42					40				
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39					37				
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35					34				
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33					31				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8829	8829	8829
5°	8750	8731	8710
10°	8697	8402	8174
15°	8594	7958	7465
20°	8468	7386	6564
25°	8321	6726	5647
30°	8137	6017	4774
35°	7940	5321	4031
40°	7742	4646	3389
45°	7509	4007	2989
50°	7274	3412	2744
55°	7058	3039	2533
60°	6761	2746	2363
65°	6484	2516	2219
70°	6042	2316	2087
75°	5408	2143	1966
80°	4638	1979	1826
85°	3265	1812	1743

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7509 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.9	5.3
10°-20°	179.6	14.0
20°-30°	236.6	18.4
30°-40°	240.1	18.7
40°-50°	208.7	16.3
50°-60°	163.5	12.7
60°-70°	111.1	8.7
70°-80°	60.2	4.7
80°-90°	16.6	1.3
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°	484.1	37.7
0°-40°	724.2	56.4
0°-60°	1096.5	85.4
0°-90°	1284.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1284.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	732	732	732	732	732	
5°	723	732	721	715	720	69
15°	688	679	638	606	598	194
25°	626	588	506	443	424	288
35°	540	476	362	292	274	337
45°	440	353	235	181	175	340
55°	336	233	145	123	120	300
65°	227	126	88	79	78	224
75°	116	58	46	43	42	124
85°	24	14	13	12	13	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	732.3	732.3	732.3	732.3	732.3
2.5°	726.3	735.6	728.5	729.1	731.3
5°	723.0	731.8	721.4	714.8	719.7
7.5°	718.1	724.7	705.5	695.1	696.7
10°	710.4	712.6	686.3	669.9	667.7
12.5°	700.0	696.2	663.3	639.2	635.4
15°	688.5	678.7	637.6	606.4	598.1
17.5°	675.4	658.9	607.5	569.1	556.5
20°	660.0	637.0	575.7	526.9	511.6
22.5°	643.6	614.0	541.2	483.7	467.8
25°	625.5	587.7	505.6	442.6	424.5
27.5°	605.8	561.4	469.4	402.1	381.8
30°	584.5	534.1	432.2	362.6	342.9
32.5°	562.5	505.0	396.6	325.9	306.7
35°	539.5	475.5	361.5	292.5	273.9
37.5°	516.0	445.3	327.6	260.7	243.2
40°	491.9	414.6	295.2	231.2	215.3
42.5°	466.1	384.0	264.0	203.2	191.2
45°	440.4	353.3	235.0	181.3	175.3
47.5°	414.6	322.1	207.6	166.0	160.5
50°	387.8	292.0	181.9	151.7	146.3
52.5°	361.5	262.4	160.5	138.0	134.2
55°	335.8	233.3	144.6	123.2	120.5
57.5°	308.9	204.9	128.7	111.7	108.5
60°	280.4	177.5	113.9	99.7	98.0
62.5°	254.7	151.7	100.8	89.3	87.6
65°	227.3	126.0	88.2	78.9	77.8
67.5°	199.4	104.6	76.7	69.0	68.5
70°	171.4	88.2	65.7	59.7	59.2
72.5°	144.1	72.9	55.3	51.5	50.4
75°	116.1	58.1	46.0	42.7	42.2
77.5°	90.9	44.9	36.7	34.5	34.0
80°	66.8	33.4	28.5	26.8	26.3
82.5°	43.8	23.0	20.3	19.2	19.2
85°	23.6	14.2	13.1	12.1	12.6
87.5°	8.2	6.0	6.0	5.5	6.0
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	18.13	19.62	18.49	19.93	20.25	13.27	14.77	13.64	15.08	15.39
	3H	20.01	21.35	20.39	21.68	22.04	14.90	16.24	15.28	16.57	16.93
	4H	20.77	22.02	21.17	22.37	22.75	15.54	16.79	15.94	17.14	17.52
	6H	21.33	22.49	21.75	22.86	23.25	16.03	17.19	16.44	17.56	17.95
	8H	21.51	22.61	21.93	23.00	23.40	16.20	17.30	16.63	17.69	18.10
	12H	21.60	22.66	22.03	23.04	23.47	16.32	17.38	16.76	17.76	18.19
4H	2H	18.17	19.43	18.57	19.78	20.16	14.00	15.26	14.40	15.61	15.99
	3H	20.19	21.23	20.60	21.63	22.03	15.82	16.87	16.23	17.27	17.67
	4H	21.01	21.95	21.44	22.36	22.80	16.57	17.51	17.00	17.93	18.36
	6H	21.69	22.51	22.15	22.95	23.41	17.18	18.00	17.64	18.44	18.90
	8H	21.92	22.68	22.38	23.13	23.59	17.39	18.16	17.86	18.60	19.07
	12H	22.07	22.75	22.55	23.23	23.70	17.56	18.24	18.05	18.72	19.19
8H	4H	21.03	21.79	21.49	22.24	22.71	16.95	17.72	17.42	18.16	18.63
	6H	21.76	22.39	22.26	22.88	23.36	17.68	18.31	18.18	18.80	19.28
	8H	22.03	22.59	22.54	23.10	23.59	17.97	18.54	18.48	19.05	19.53
	12H	22.24	22.74	22.75	23.23	23.80	18.22	18.72	18.73	19.21	19.77
12H	4H	21.02	21.70	21.50	22.18	22.65	17.01	17.69	17.49	18.17	18.64
	6H	21.74	22.31	22.26	22.82	23.31	17.76	18.33	18.28	18.84	19.33
	8H	22.05	22.55	22.56	23.04	23.61	18.11	18.61	18.62	19.10	19.67