

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: P1055641

Luminaire Tested: S123R3DR-S560D927-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055641
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S560D927-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

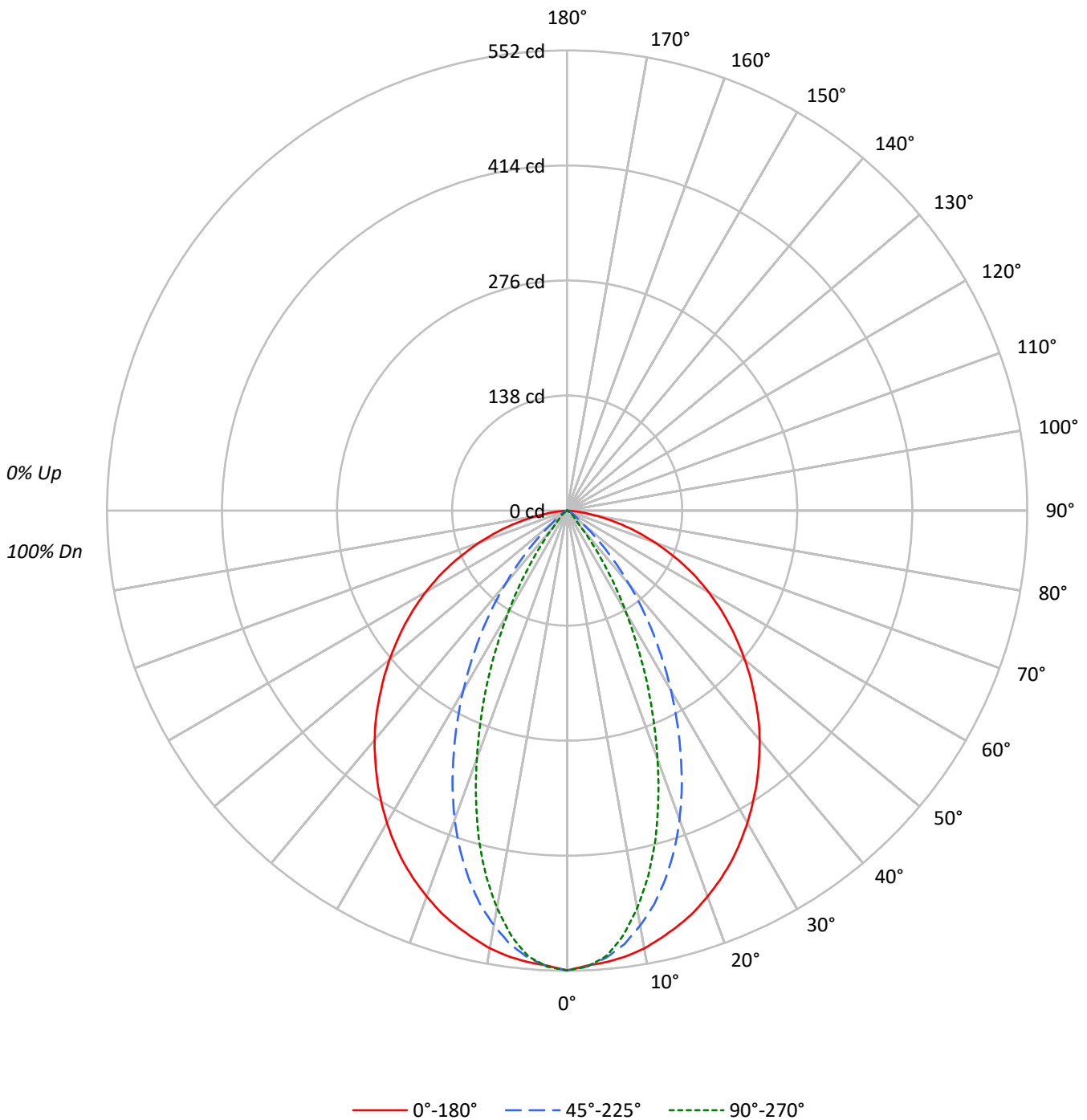
Lumens per Lamp: N/A
Luminaire Lumens: 645.5 lumens
Efficiency: N/A
Efficacy: 33.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	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	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	57	79	69	62	57	67	61	57	66	61	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6649	6649	6649
5°	6578	6515	6494
10°	6528	6184	5925
15°	6433	5698	5105
20°	6319	5058	4066
25°	6187	4285	2998
30°	6021	3472	1967
35°	5843	2643	1077
40°	5655	1827	370
45°	5432	1064	215
50°	5214	418	129
55°	4990	265	61
60°	4731	166	27
65°	4408	83	17
70°	3952	39	21
75°	3359	28	28
80°	2499	42	0
85°	954	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5432 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.6	7.8
10°-20°	128.3	19.9
20°-30°	153.1	23.7
30°-40°	129.8	20.1
40°-50°	88.2	13.7
50°-60°	54.7	8.5
60°-70°	27.7	4.3
70°-80°	11.3	1.8
80°-90°	1.7	0.3
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°	331.9	51.4
0°-40°	461.8	71.5
0°-60°	604.7	93.7
0°-90°	645.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	645.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	552	552	552	552	552	
5°	544	549	538	534	537	52
15°	515	502	456	420	409	145
25°	465	422	322	249	225	214
35°	397	319	180	97	73	248
45°	319	209	62	15	13	246
55°	237	105	13	5	3	212
65°	154	26	3	1	1	153
75°	72	5	1	1	1	77
85°	7	0	0	1	0	12
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	551.5	551.5	551.5	551.5	551.5
2.5°	546.3	553.8	547.5	546.9	547.5
5°	543.5	548.6	538.3	534.3	536.6
7.5°	539.5	541.7	524.6	514.3	514.3
10°	533.2	531.4	505.1	488.0	484.0
12.5°	524.6	517.7	483.4	456.5	449.1
15°	515.4	502.3	456.5	420.5	409.0
17.5°	505.1	485.1	427.3	380.4	363.8
20°	492.5	465.7	394.2	336.9	316.9
22.5°	479.4	444.5	359.3	292.3	270.0
25°	465.1	421.6	322.1	248.8	225.4
27.5°	449.1	397.6	285.5	207.1	181.3
30°	432.5	372.4	249.4	167.0	141.3
32.5°	414.7	346.1	213.4	130.4	106.4
35°	397.0	318.6	179.6	96.7	73.2
37.5°	378.1	291.2	147.0	66.9	46.3
40°	359.3	264.3	116.1	42.3	23.5
42.5°	339.8	236.3	88.1	21.2	16.0
45°	318.6	208.8	62.4	15.4	12.6
47.5°	298.6	182.5	41.2	12.6	9.7
50°	278.0	156.2	22.3	9.2	6.9
52.5°	257.4	131.0	16.0	6.9	4.6
55°	237.4	105.3	12.6	4.6	2.9
57.5°	216.8	82.9	9.7	2.9	1.7
60°	196.2	61.2	6.9	1.7	1.1
62.5°	175.6	42.3	4.6	1.1	0.6
65°	154.5	25.7	2.9	0.6	0.6
67.5°	132.7	17.7	1.7	0.6	0.6
70°	112.1	12.6	1.1	0.6	0.6
72.5°	91.5	8.0	0.6	0.6	0.0
75°	72.1	4.6	0.6	0.6	0.6
77.5°	53.2	1.7	0.6	0.6	0.0
80°	36.0	0.6	0.6	0.6	0.0
82.5°	20.0	0.0	0.6	0.6	0.0
85°	6.9	0.0	0.0	0.6	0.0
87.5°	0.0	0.0	0.0	0.6	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	15.63	16.91	15.99	17.22	17.54	0.00	0.00	0.00	0.00	0.00
	3H	17.57	18.71	17.95	19.04	19.40	0.00	0.00	0.00	0.00	0.00
	4H	18.40	19.46	18.80	19.81	20.19	0.00	0.00	0.00	0.00	0.00
	6H	18.95	19.92	19.37	20.29	20.69	0.00	0.00	0.00	0.00	0.00
	8H	19.08	20.00	19.51	20.39	20.79	0.00	0.00	0.00	0.00	0.00
	12H	19.10	19.98	19.54	20.36	20.79	0.00	0.00	0.00	0.00	0.00
4H	2H	15.39	16.45	15.79	16.80	17.18	0.00	0.00	0.00	0.00	0.00
	3H	17.34	18.21	17.76	18.61	19.01	0.00	0.00	0.00	0.00	0.00
	4H	18.16	18.93	18.59	19.35	19.79	0.00	0.00	0.00	0.00	0.00
	6H	18.76	19.42	19.22	19.87	20.34	0.00	0.00	0.00	0.00	0.00
	8H	18.91	19.53	19.38	19.98	20.45	0.00	0.00	0.00	0.00	0.00
	12H	18.96	19.50	19.45	19.99	20.46	0.00	0.00	0.00	0.00	0.00
8H	4H	18.02	18.63	18.49	19.08	19.55	0.00	0.00	0.00	0.00	0.00
	6H	18.60	19.10	19.10	19.60	20.08	0.00	0.00	0.00	0.00	0.00
	8H	18.75	19.20	19.27	19.71	20.21	0.00	0.00	0.00	0.00	0.00
	12H	18.80	19.20	19.32	19.70	20.27	0.00	0.00	0.00	0.00	0.00
12H	4H	17.97	18.51	18.45	19.00	19.47	0.00	0.00	0.00	0.00	0.00
	6H	18.53	18.98	19.06	19.50	19.99	0.00	0.00	0.00	0.00	0.00
	8H	18.70	19.10	19.22	19.59	20.17	0.00	0.00	0.00	0.00	0.00