

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: P1055643

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055643
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-S560D927-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

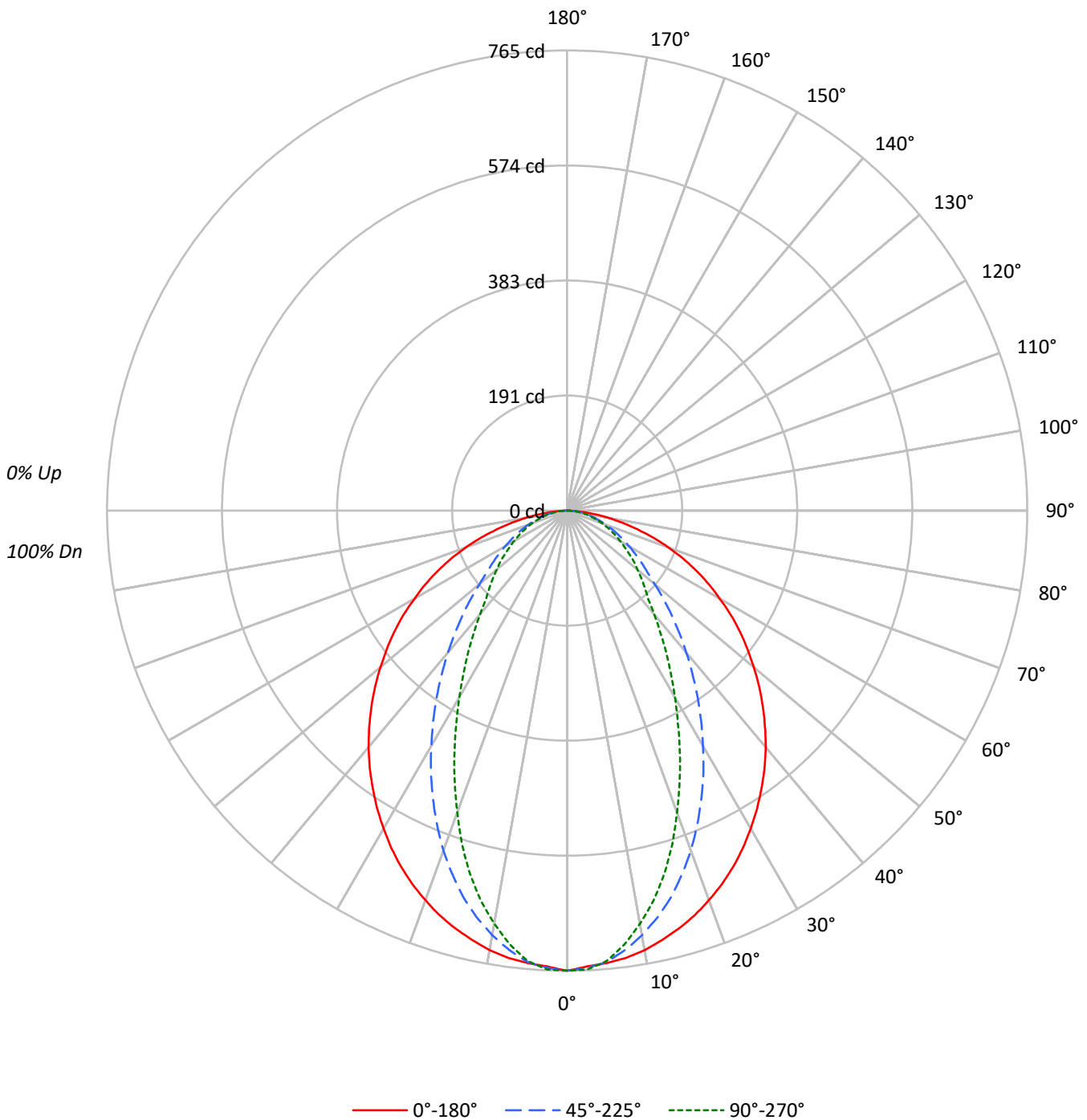
Lumens per Lamp: N/A
Luminaire Lumens: 1341.4 lumens
Efficiency: N/A
Efficacy: 70.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9222	9222	9222
5°	9139	9118	9097
10°	9084	8775	8538
15°	8976	8312	7797
20°	8844	7713	6855
25°	8691	7024	5898
30°	8498	6284	4985
35°	8294	5558	4209
40°	8085	4852	3538
45°	7841	4184	3122
50°	7596	3562	2864
55°	7372	3174	2646
60°	7063	2869	2469
65°	6773	2627	2316
70°	6313	2418	2178
75°	5650	2241	2050
80°	4846	2062	1909
85°	3403	1895	1826

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7841 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.9	5.3
10°-20°	187.6	14.0
20°-30°	247.1	18.4
30°-40°	250.8	18.7
40°-50°	218.0	16.3
50°-60°	170.8	12.7
60°-70°	116.0	8.7
70°-80°	62.9	4.7
80°-90°	17.3	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°	505.6	37.7
0°-40°	756.4	56.4
0°-60°	1145.2	85.4
0°-90°	1341.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1341.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	765	765	765	765	765	
5°	755	764	753	746	752	72
15°	719	709	666	633	625	203
25°	653	614	528	462	443	301
35°	564	497	378	306	286	352
45°	460	369	245	189	183	355
55°	351	244	151	129	126	313
65°	237	132	92	82	81	234
75°	121	61	48	45	44	129
85°	25	15	14	13	13	31
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	764.9	764.9	764.9	764.9	764.9
2.5°	758.6	768.3	760.9	761.4	763.7
5°	755.1	764.3	753.4	746.5	751.7
7.5°	750.0	756.8	736.8	726.0	727.7
10°	742.0	744.3	716.8	699.6	697.4
12.5°	731.1	727.1	692.8	667.6	663.6
15°	719.1	708.8	665.9	633.3	624.7
17.5°	705.4	688.2	634.4	594.4	581.2
20°	689.3	665.3	601.2	550.3	534.3
22.5°	672.2	641.3	565.2	505.1	488.5
25°	653.3	613.8	528.0	462.2	443.4
27.5°	632.7	586.4	490.3	419.9	398.7
30°	610.4	557.8	451.4	378.7	358.1
32.5°	587.5	527.4	414.2	340.4	320.4
35°	563.5	496.6	377.6	305.5	286.0
37.5°	538.9	465.1	342.1	272.3	254.0
40°	513.7	433.1	308.3	241.4	224.8
42.5°	486.8	401.0	275.7	212.2	199.7
45°	459.9	369.0	245.4	189.4	183.1
47.5°	433.1	336.4	216.8	173.3	167.6
50°	405.0	304.9	189.9	158.5	152.7
52.5°	377.6	274.0	167.6	144.2	140.2
55°	350.7	243.7	151.0	128.7	125.9
57.5°	322.6	214.0	134.4	116.7	113.3
60°	292.9	185.3	119.0	104.1	102.4
62.5°	266.0	158.5	105.3	93.2	91.5
65°	237.4	131.6	92.1	82.4	81.2
67.5°	208.2	109.3	80.1	72.1	71.5
70°	179.1	92.1	68.6	62.4	61.8
72.5°	150.5	76.1	57.8	53.8	52.6
75°	121.3	60.6	48.1	44.6	44.0
77.5°	95.0	46.9	38.3	36.0	35.5
80°	69.8	34.9	29.7	28.0	27.5
82.5°	45.8	24.0	21.2	20.0	20.0
85°	24.6	14.9	13.7	12.6	13.2
87.5°	8.6	6.3	6.3	5.7	6.3
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	18.28	19.77	18.64	20.08	20.40	13.43	14.92	13.79	15.23	15.55
	3H	20.16	21.50	20.54	21.83	22.19	15.05	16.39	15.43	16.72	17.08
	4H	20.92	22.18	21.32	22.52	22.90	15.69	16.95	16.09	17.29	17.67
	6H	21.48	22.64	21.90	23.01	23.40	16.18	17.34	16.59	17.71	18.10
	8H	21.66	22.76	22.08	23.15	23.55	16.35	17.45	16.78	17.84	18.25
	12H	21.75	22.81	22.19	23.19	23.62	16.47	17.53	16.91	17.91	18.34
4H	2H	18.32	19.58	18.72	19.93	20.31	14.15	15.41	14.55	15.76	16.14
	3H	20.34	21.38	20.75	21.78	22.19	15.98	17.02	16.39	17.42	17.82
	4H	21.16	22.10	21.59	22.51	22.95	16.72	17.66	17.15	18.08	18.52
	6H	21.84	22.66	22.30	23.10	23.56	17.33	18.15	17.79	18.59	19.05
	8H	22.07	22.83	22.53	23.28	23.75	17.54	18.31	18.01	18.75	19.22
	12H	22.22	22.90	22.71	23.38	23.85	17.71	18.39	18.20	18.87	19.34
8H	4H	21.18	21.95	21.65	22.39	22.86	17.10	17.87	17.57	18.31	18.78
	6H	21.91	22.54	22.41	23.03	23.51	17.83	18.46	18.33	18.95	19.43
	8H	22.18	22.75	22.69	23.26	23.74	18.12	18.69	18.63	19.20	19.68
	12H	22.39	22.89	22.90	23.38	23.95	18.36	18.86	18.87	19.36	19.92
12H	4H	21.17	21.85	21.65	22.33	22.80	17.16	17.84	17.64	18.32	18.79
	6H	21.89	22.46	22.41	22.97	23.46	17.91	18.48	18.43	18.99	19.48
	8H	22.20	22.70	22.71	23.19	23.76	18.26	18.76	18.77	19.25	19.82