

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: P1055777

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055777
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
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-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

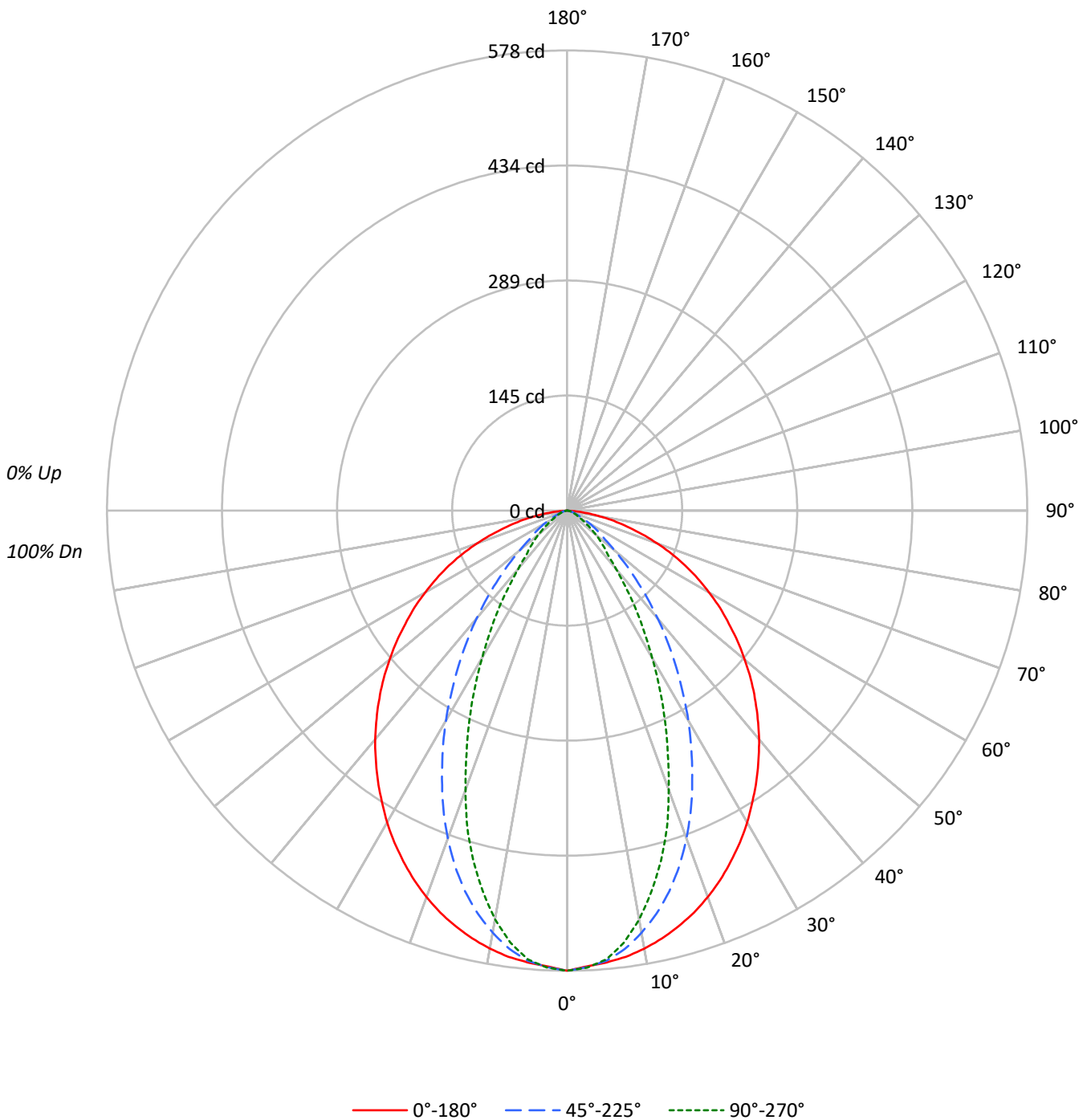
Lumens per Lamp: N/A
Luminaire Lumens: 803.6 lumens
Efficiency: N/A
Efficacy: 46.5 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (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	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79					79			
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70					70			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62					62			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46					46			
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42					42			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39					39			
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36					36			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6967	6967	6967
5°	6895	6868	6848
10°	6840	6591	6384
15°	6748	6181	5682
20°	6627	5622	4786
25°	6470	4947	3862
30°	6298	4241	2974
35°	6102	3499	2200
40°	5905	2784	1500
45°	5688	2082	1130
50°	5456	1448	883
55°	5215	1059	645
60°	4967	793	463
65°	4673	531	359
70°	4230	388	289
75°	3647	279	228
80°	2930	229	187
85°	1522	221	152

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5688 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.4	6.6
10°-20°	139.1	17.3
20°-30°	174.7	21.7
30°-40°	162.7	20.2
40°-50°	124.6	15.5
50°-60°	82.8	10.3
60°-70°	44.6	5.6
70°-80°	18.3	2.3
80°-90°	3.5	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°	367.2	45.7
0°-40°	529.9	65.9
0°-60°	737.2	91.7
0°-90°	803.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	803.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	578	578	578	578	578	
5°	570	576	568	565	566	54
15°	541	532	495	466	455	152
25°	486	454	372	310	290	224
35°	415	353	238	168	150	259
45°	334	246	122	72	66	257
55°	248	144	50	35	31	222
65°	164	55	19	14	13	162
75°	78	13	6	6	5	84
85°	11	2	2	2	1	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	577.9	577.9	577.9	577.9	577.9
2.5°	572.9	580.1	574.0	574.6	574.6
5°	569.7	575.7	567.5	565.3	565.8
7.5°	565.3	569.1	555.4	548.3	547.2
10°	558.7	559.8	538.4	525.8	521.5
12.5°	550.5	546.7	518.7	497.9	489.7
15°	540.6	531.9	495.2	466.1	455.2
17.5°	529.7	514.9	468.3	430.5	417.4
20°	516.5	495.7	438.2	391.1	373.0
22.5°	502.3	475.4	406.4	350.6	330.3
25°	486.4	453.5	371.9	310.0	290.3
27.5°	470.0	430.0	338.0	271.7	251.4
30°	452.4	405.9	304.6	234.4	213.6
32.5°	433.3	379.6	270.0	199.9	179.1
35°	414.6	353.3	237.7	168.2	149.5
37.5°	394.9	327.0	206.5	140.2	119.4
40°	375.2	300.2	176.9	112.8	95.3
42.5°	354.4	273.3	149.0	89.8	76.1
45°	333.6	246.5	122.1	71.8	66.3
47.5°	312.8	219.6	98.6	61.9	56.4
50°	290.9	193.9	77.2	52.6	47.1
52.5°	270.0	168.2	60.3	43.3	38.3
55°	248.1	143.5	50.4	35.1	30.7
57.5°	227.9	118.3	41.6	27.4	24.1
60°	206.0	95.9	32.9	21.4	19.2
62.5°	185.1	75.0	25.2	17.0	15.3
65°	163.8	55.3	18.6	13.7	12.6
67.5°	142.4	40.0	14.2	11.0	10.4
70°	120.0	30.1	11.0	8.8	8.2
72.5°	98.6	21.4	8.2	7.1	6.6
75°	78.3	13.1	6.0	5.5	4.9
77.5°	60.3	7.7	4.4	4.4	3.8
80°	42.2	4.4	3.3	3.3	2.7
82.5°	25.7	2.7	2.2	2.2	2.2
85°	11.0	1.6	1.6	1.6	1.1
87.5°	1.6	0.5	0.5	0.5	0.5
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	16.56	17.91	16.92	18.23	18.54	5.13	6.49	5.50	6.80	7.12
	3H	18.31	19.52	18.69	19.85	20.21	5.80	7.00	6.18	7.33	7.70
	4H	19.01	20.13	19.41	20.48	20.87	5.99	7.12	6.40	7.47	7.85
	6H	19.52	20.56	19.94	20.93	21.32	6.11	7.15	6.53	7.52	7.91
	8H	19.66	20.64	20.09	21.03	21.44	6.15	7.13	6.58	7.52	7.92
	12H	19.72	20.65	20.15	21.03	21.46	6.16	7.09	6.59	7.48	7.91
4H	2H	16.37	17.49	16.77	17.84	18.22	5.69	6.81	6.09	7.16	7.55
	3H	18.16	19.08	18.57	19.48	19.89	6.49	7.41	6.90	7.81	8.22
	4H	18.85	19.68	19.29	20.09	20.54	6.75	7.57	7.18	7.99	8.43
	6H	19.42	20.13	19.89	20.58	21.05	6.94	7.65	7.41	8.10	8.57
	8H	19.60	20.26	20.07	20.71	21.18	7.00	7.66	7.47	8.11	8.58
	12H	19.68	20.27	20.17	20.75	21.23	7.03	7.62	7.52	8.10	8.57
8H	4H	18.73	19.39	19.20	19.84	20.31	7.06	7.72	7.53	8.17	8.64
	6H	19.28	19.83	19.79	20.32	20.80	7.31	7.85	7.81	8.35	8.83
	8H	19.46	19.95	19.98	20.46	20.95	7.40	7.88	7.92	8.40	8.89
	12H	19.56	19.99	20.08	20.49	21.06	7.48	7.90	7.99	8.40	8.97
12H	4H	18.69	19.27	19.17	19.75	20.23	7.11	7.69	7.59	8.17	8.65
	6H	19.23	19.71	19.75	20.23	20.72	7.35	7.84	7.88	8.35	8.85
	8H	19.42	19.85	19.93	20.34	20.91	7.48	7.91	8.00	8.40	8.97