

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: P1055649

Luminaire Tested: S123R3DR-S560D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055649
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-S560D935-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

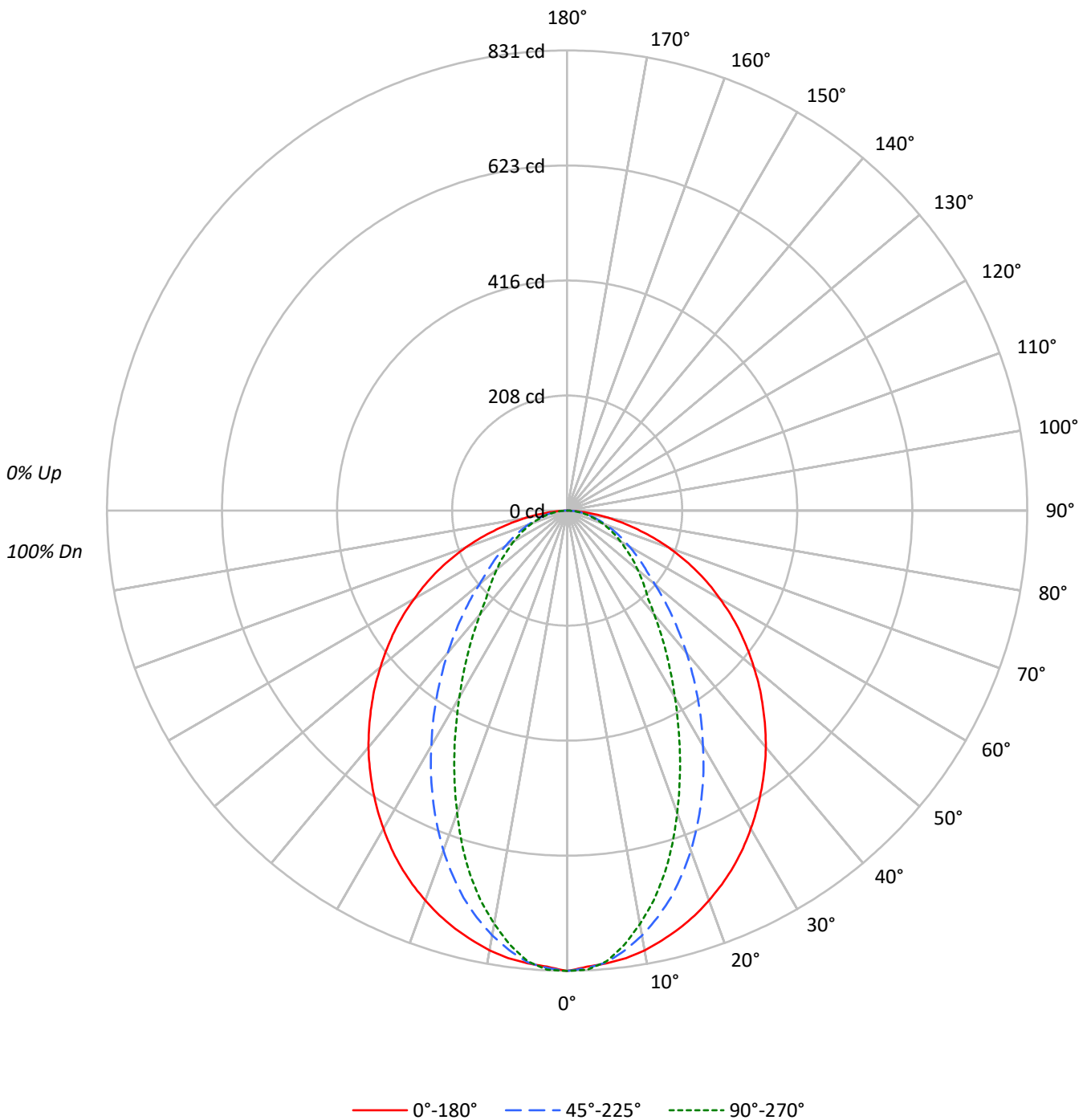
Lumens per Lamp: N/A
Luminaire Lumens: 1457.9 lumens
Efficiency: N/A
Efficacy: 76.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 19.1
Input Voltage (V): 120
Input Current (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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	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°	10022	10022	10022
5°	9932	9911	9888
10°	9872	9538	9279
15°	9756	9033	8475
20°	9612	8385	7450
25°	9446	7634	6411
30°	9236	6830	5418
35°	9013	6040	4576
40°	8787	5274	3846
45°	8523	4547	3393
50°	8257	3871	3114
55°	8011	3449	2875
60°	7675	3118	2684
65°	7360	2856	2519
70°	6860	2630	2369
75°	6140	2432	2231
80°	5270	2243	2069
85°	3693	2061	1978

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8523 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.1	5.3
10°-20°	203.9	14.0
20°-30°	268.6	18.4
30°-40°	272.6	18.7
40°-50°	236.9	16.3
50°-60°	185.6	12.7
60°-70°	126.1	8.7
70°-80°	68.3	4.7
80°-90°	18.8	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°	549.5	37.7
0°-40°	822.1	56.4
0°-60°	1244.7	85.4
0°-90°	1457.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1457.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	831	831	831	831	831	
5°	821	831	819	811	817	78
15°	782	770	724	688	679	220
25°	710	667	574	502	482	327
35°	612	540	410	332	311	383
45°	500	401	267	206	199	386
55°	381	265	164	140	137	340
65°	258	143	100	90	88	255
75°	132	66	52	48	48	141
85°	27	16	15	14	14	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	831.3	831.3	831.3	831.3	831.3
2.5°	824.5	835.0	826.9	827.6	830.1
5°	820.7	830.7	818.9	811.4	817.0
7.5°	815.1	822.6	800.8	789.0	790.9
10°	806.4	808.9	779.1	760.4	757.9
12.5°	794.6	790.3	753.0	725.6	721.2
15°	781.6	770.4	723.7	688.3	679.0
17.5°	766.6	748.0	689.5	646.0	631.7
20°	749.2	723.1	653.5	598.1	580.7
22.5°	730.6	697.0	614.3	549.0	531.0
25°	710.1	667.2	573.9	502.4	481.9
27.5°	687.7	637.3	532.9	456.4	433.4
30°	663.4	606.2	490.6	411.6	389.2
32.5°	638.6	573.3	450.2	369.9	348.2
35°	612.4	539.7	410.4	332.0	310.9
37.5°	585.7	505.5	371.8	296.0	276.1
40°	558.3	470.7	335.1	262.4	244.4
42.5°	529.1	435.9	299.7	230.7	217.0
45°	499.9	401.0	266.7	205.8	199.0
47.5°	470.7	365.6	235.6	188.4	182.2
50°	440.2	331.4	206.4	172.2	166.0
52.5°	410.4	297.8	182.2	156.7	152.3
55°	381.1	264.9	164.1	139.9	136.8
57.5°	350.7	232.5	146.1	126.8	123.1
60°	318.3	201.5	129.3	113.2	111.3
62.5°	289.1	172.2	114.4	101.3	99.5
65°	258.0	143.0	100.1	89.5	88.3
67.5°	226.3	118.8	87.0	78.3	77.7
70°	194.6	100.1	74.6	67.8	67.2
72.5°	163.5	82.7	62.8	58.4	57.2
75°	131.8	65.9	52.2	48.5	47.9
77.5°	103.2	51.0	41.7	39.2	38.5
80°	75.9	37.9	32.3	30.5	29.8
82.5°	49.7	26.1	23.0	21.8	21.8
85°	26.7	16.2	14.9	13.7	14.3
87.5°	9.3	6.8	6.8	6.2	6.8
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	18.57	20.06	18.93	20.37	20.69	13.71	15.21	14.08	15.52	15.83
	3H	20.45	21.79	20.83	22.12	22.48	15.34	16.68	15.72	17.01	17.37
	4H	21.21	22.46	21.61	22.81	23.19	15.98	17.23	16.38	17.58	17.96
	6H	21.77	22.93	22.19	23.30	23.69	16.47	17.63	16.88	17.99	18.39
	8H	21.95	23.05	22.37	23.44	23.84	16.64	17.74	17.07	18.13	18.53
	12H	22.04	23.10	22.47	23.48	23.91	16.76	17.82	17.19	18.20	18.63
4H	2H	18.61	19.87	19.01	20.22	20.60	14.44	15.70	14.84	16.05	16.43
	3H	20.63	21.67	21.04	22.07	22.47	16.26	17.31	16.67	17.71	18.11
	4H	21.45	22.39	21.88	22.80	23.24	17.01	17.95	17.44	18.37	18.80
	6H	22.13	22.95	22.59	23.39	23.85	17.62	18.44	18.08	18.88	19.34
	8H	22.36	23.12	22.82	23.57	24.04	17.83	18.60	18.30	19.04	19.51
	12H	22.51	23.19	22.99	23.67	24.14	18.00	18.68	18.49	19.16	19.63
8H	4H	21.47	22.23	21.93	22.68	23.15	17.39	18.16	17.86	18.60	19.07
	6H	22.20	22.83	22.70	23.32	23.80	18.12	18.75	18.62	19.24	19.72
	8H	22.47	23.03	22.98	23.54	24.03	18.41	18.98	18.93	19.49	19.98
	12H	22.68	23.18	23.19	23.67	24.23	18.66	19.16	19.17	19.65	20.21
12H	4H	21.46	22.14	21.94	22.62	23.09	17.45	18.13	17.93	18.61	19.08
	6H	22.18	22.75	22.70	23.26	23.75	18.20	18.77	18.72	19.28	19.77
	8H	22.49	22.99	23.00	23.48	24.05	18.55	19.05	19.06	19.54	20.11