

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: P1056182

Luminaire Tested: S124R3DR-H575D927-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056182
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-9)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H575D927-X4F0-XX-UDD-F-S
Description: DEFINE 4, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

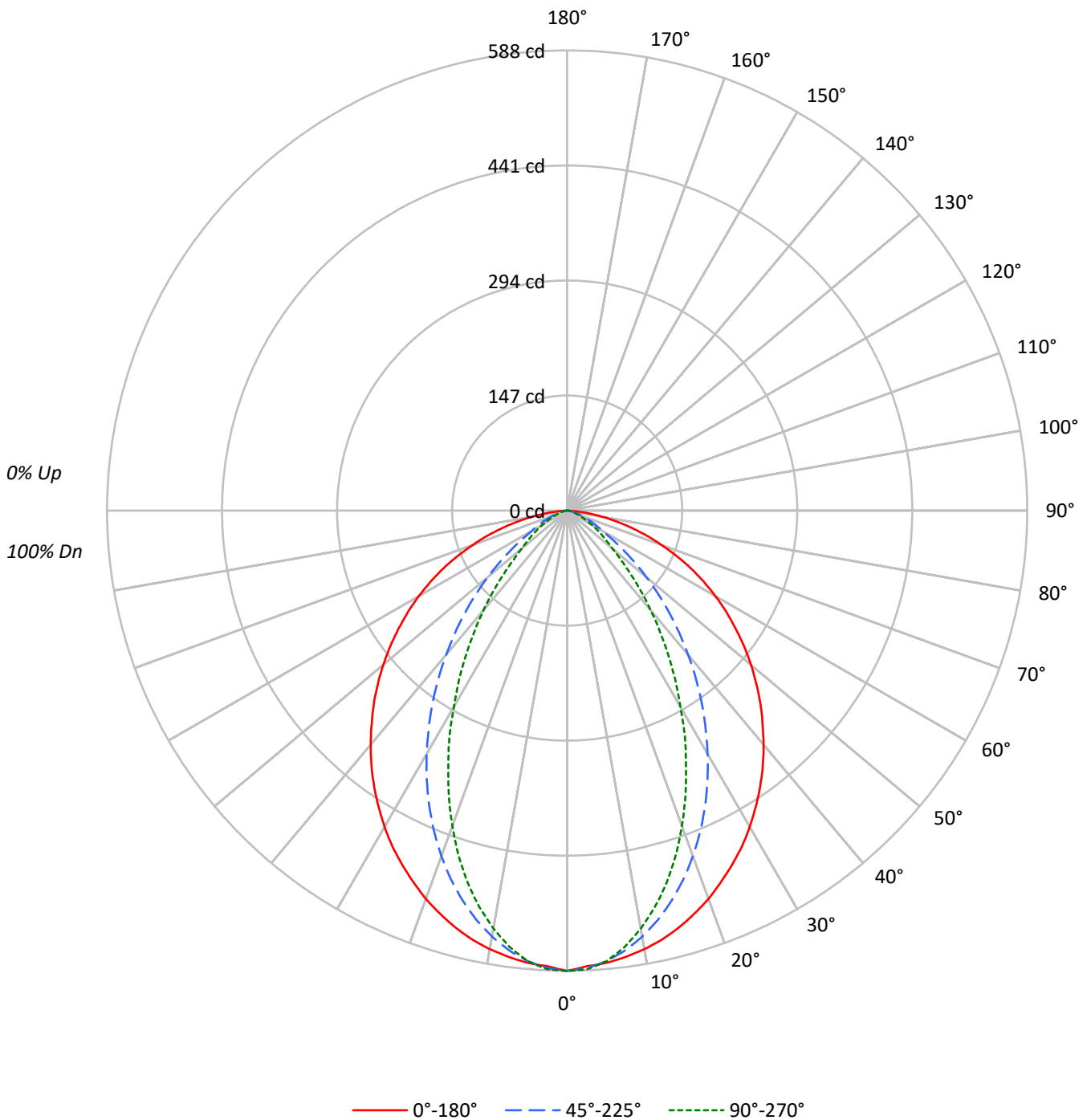
Lumens per Lamp: N/A
Luminaire Lumens: 951.2 lumens
Efficiency: N/A
Efficacy: 55.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.87 / 1.03
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	104	101	108	105	102	99	101	98	96	97	95	93	94	92	90	89
2	103	96	91	86	101	94	89	85	91	87	83	88	84	81	85	82	79	78
3	95	87	80	74	93	85	79	74	82	77	73	80	75	71	77	73	70	68
4	89	78	71	65	86	77	70	65	75	69	64	73	67	63	71	66	62	60
5	82	71	64	58	80	70	63	58	68	62	57	66	61	56	65	60	56	54
6	77	65	57	52	75	64	57	52	63	56	51	61	55	51	60	54	50	48
7	72	60	52	47	70	59	52	47	58	51	46	56	50	46	55	50	46	44
8	67	55	48	42	66	55	47	42	53	47	42	52	46	42	51	46	42	40
9	63	51	44	39	62	51	44	39	50	43	39	49	43	38	48	42	38	37
10	60	48	41	36	59	47	40	36	46	40	36	45	40	35	45	39	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5201	5201	5201
5°	5148	5129	5129
10°	5109	4962	4869
15°	5049	4723	4502
20°	4968	4422	4035
25°	4868	4066	3505
30°	4765	3663	2952
35°	4641	3234	2430
40°	4507	2776	1916
45°	4370	2308	1432
50°	4219	1816	1047
55°	4052	1343	835
60°	3874	930	640
65°	3644	722	471
70°	3299	509	367
75°	2883	355	280
80°	2317	280	249
85°	1278	223	223

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4370 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.6	5.7
10°-20°	145.8	15.3
20°-30°	194.5	20.4
30°-40°	195.8	20.6
40°-50°	160.6	16.9
50°-60°	109.8	11.5
60°-70°	61.3	6.4
70°-80°	24.3	2.6
80°-90°	4.6	0.5
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°	394.8	41.5
0°-40°	590.6	62.1
0°-60°	861.0	90.5
0°-90°	951.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	951.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	588	588	588	588	588	
5°	580	587	578	575	578	55
15°	552	546	516	498	492	155
25°	499	474	417	375	359	230
35°	430	384	300	243	225	269
45°	350	285	185	130	114	269
55°	263	185	87	58	54	235
65°	174	88	34	25	22	172
75°	84	23	10	9	8	90
85°	13	2	2	2	2	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	588.3	588.3	588.3	588.3	588.3
2.5°	582.8	589.9	585.0	585.5	586.6
5°	580.1	586.6	577.9	575.1	577.9
7.5°	575.1	580.1	566.9	561.4	562.5
10°	569.1	570.8	552.7	543.4	542.3
12.5°	561.4	559.3	535.7	522.0	518.7
15°	551.6	545.6	516.0	497.9	491.9
17.5°	540.1	529.7	494.1	470.5	461.8
20°	528.0	512.7	470.0	439.8	428.9
22.5°	513.8	494.6	444.2	407.5	394.9
25°	499.0	474.4	416.8	374.7	359.3
27.5°	483.7	453.5	388.4	341.3	325.9
30°	466.7	431.1	358.8	307.8	289.2
32.5°	448.6	408.1	329.2	275.0	257.4
35°	430.0	384.5	299.6	242.7	225.1
37.5°	410.8	360.4	270.0	212.0	194.5
40°	390.5	335.8	240.5	182.9	166.0
42.5°	369.7	310.6	212.0	155.6	139.7
45°	349.5	285.4	184.6	129.8	114.5
47.5°	328.1	260.2	157.8	105.7	92.6
50°	306.7	235.0	132.0	84.9	76.1
52.5°	284.8	209.8	108.5	69.6	63.5
55°	262.9	184.6	87.1	58.1	54.2
57.5°	241.0	159.4	67.4	49.3	44.9
60°	219.1	134.7	52.6	40.0	36.2
62.5°	196.6	110.1	43.3	31.8	28.5
65°	174.2	87.6	34.5	24.6	22.5
67.5°	151.7	66.8	26.3	19.2	17.5
70°	127.6	47.7	19.7	14.8	14.2
72.5°	106.8	32.3	14.2	11.5	11.0
75°	84.4	23.0	10.4	8.8	8.2
77.5°	65.2	14.8	7.7	7.1	6.6
80°	45.5	8.2	5.5	4.9	4.9
82.5°	27.9	4.4	3.8	3.3	3.3
85°	12.6	2.2	2.2	2.2	2.2
87.5°	2.2	1.1	1.1	1.1	1.1
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	16.45	17.86	16.82	18.17	18.49	7.54	8.95	7.91	9.26	9.58
	3H	18.04	19.29	18.42	19.62	19.98	8.13	9.39	8.51	9.71	10.08
	4H	18.63	19.80	19.04	20.15	20.53	8.29	9.46	8.69	9.81	10.19
	6H	19.07	20.14	19.48	20.51	20.90	8.40	9.47	8.81	9.84	10.24
	8H	19.18	20.20	19.61	20.59	20.99	8.42	9.44	8.85	9.83	10.23
	12H	19.22	20.20	19.65	20.58	21.01	8.43	9.40	8.86	9.79	10.22
4H	2H	16.31	17.48	16.71	17.83	18.21	8.13	9.29	8.53	9.64	10.03
	3H	17.95	18.91	18.37	19.32	19.72	8.84	9.80	9.25	10.20	10.60
	4H	18.56	19.42	18.99	19.84	20.28	9.04	9.90	9.48	10.32	10.76
	6H	19.05	19.79	19.51	20.24	20.70	9.21	9.95	9.67	10.40	10.86
	8H	19.20	19.89	19.66	20.33	20.80	9.24	9.93	9.71	10.38	10.85
	12H	19.27	19.88	19.75	20.36	20.84	9.27	9.88	9.75	10.36	10.83
8H	4H	18.45	19.15	18.92	19.59	20.06	9.31	10.01	9.78	10.45	10.92
	6H	18.94	19.50	19.44	20.00	20.48	9.52	10.08	10.02	10.58	11.06
	8H	19.08	19.59	19.60	20.10	20.59	9.57	10.08	10.09	10.60	11.09
	12H	19.17	19.62	19.68	20.11	20.68	9.63	10.08	10.15	10.58	11.15
12H	4H	18.41	19.03	18.90	19.51	19.98	9.34	9.96	9.83	10.44	10.91
	6H	18.88	19.39	19.40	19.90	20.39	9.55	10.05	10.06	10.57	11.06
	8H	19.04	19.49	19.56	19.99	20.56	9.64	10.09	10.15	10.58	11.15