

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: P1056181

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056181
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)
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-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

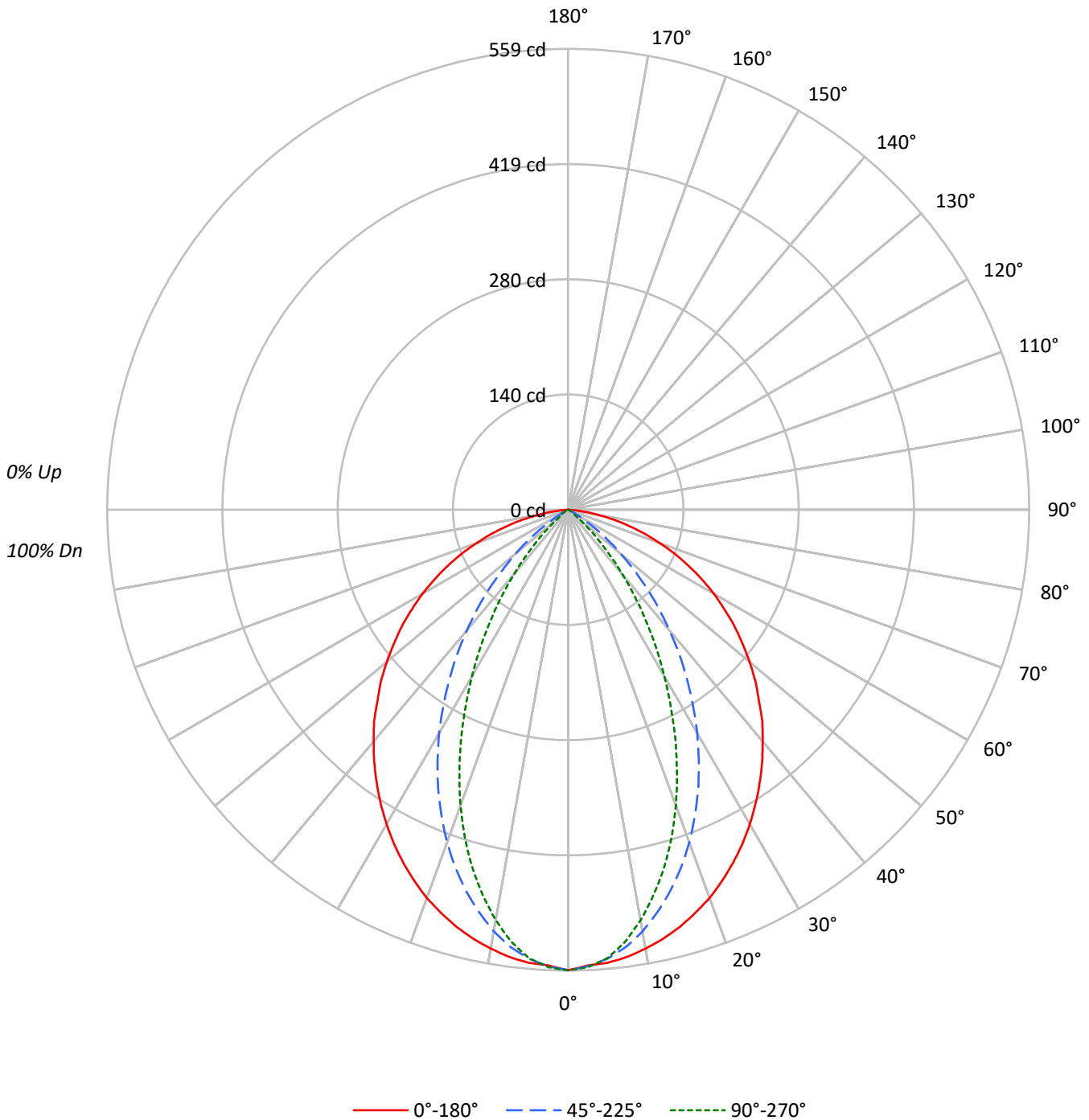
Lumens per Lamp: N/A
Luminaire Lumens: 780.9 lumens
Efficiency: N/A
Efficacy: 45.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (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	102	109	106	103	100	102	99	97		98	96	94		95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85		90	86	83		87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75		82	78	74		79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67		75	70	66		73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60		69	64	60		67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54		64	58	54		62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50		59	53	49		58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45		55	49	45		54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42		51	46	42		50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39		48	42	39		47	42	38	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4940	4940	4940
5°	4896	4852	4847
10°	4853	4662	4539
15°	4794	4382	4112
20°	4716	4040	3592
25°	4611	3639	2998
30°	4496	3193	2382
35°	4369	2708	1773
40°	4236	2207	1182
45°	4089	1684	650
50°	3948	1153	180
55°	3790	624	119
60°	3604	195	67
65°	3368	126	33
70°	3045	57	13
75°	2620	17	0
80°	1981	0	0
85°	832	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4089 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.5	6.6
10°-20°	135.3	17.3
20°-30°	174.9	22.4
30°-40°	167.1	21.4
40°-50°	125.0	16.0
50°-60°	74.4	9.5
60°-70°	37.8	4.8
70°-80°	13.1	1.7
80°-90°	1.8	0.2
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°	361.7	46.3
0°-40°	528.8	67.7
0°-60°	728.2	93.3
0°-90°	780.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	780.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	559	559	559	559	559	
5°	552	556	547	544	546	52
15°	524	513	479	456	449	148
25°	473	440	373	324	307	218
35°	405	349	251	187	164	253
45°	327	251	135	72	52	253
55°	246	153	40	9	8	220
65°	161	62	6	2	2	159
75°	77	8	0	0	0	81
85°	8	0	0	0	0	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	558.7	558.7	558.7	558.7	558.7
2.5°	553.2	559.8	554.3	554.9	555.4
5°	551.6	556.0	546.7	543.9	546.1
7.5°	547.2	548.8	535.2	528.0	528.6
10°	540.6	539.0	519.3	507.2	505.6
12.5°	533.0	527.5	500.1	482.6	478.7
15°	523.7	512.7	478.7	456.3	449.2
17.5°	512.7	496.8	455.2	425.6	416.8
20°	501.2	479.3	429.4	392.7	381.8
22.5°	487.5	459.6	401.5	358.2	344.5
25°	472.7	439.8	373.0	323.7	307.3
27.5°	457.4	418.5	342.9	288.7	269.5
30°	440.4	396.0	312.8	253.1	233.3
32.5°	422.9	373.0	281.5	220.2	198.3
35°	404.8	348.9	250.9	186.8	164.3
37.5°	386.2	324.8	221.3	155.0	132.0
40°	367.0	300.2	191.2	124.9	102.4
42.5°	348.4	275.5	162.7	96.4	75.6
45°	327.0	250.9	134.7	71.8	52.0
47.5°	307.8	226.8	107.9	48.8	30.7
50°	287.0	201.0	83.8	28.5	13.1
52.5°	266.2	176.9	61.3	12.6	9.9
55°	245.9	152.8	40.5	9.3	7.7
57.5°	224.6	128.7	21.9	7.1	5.5
60°	203.8	105.2	11.0	5.5	3.8
62.5°	182.4	82.7	8.8	3.3	2.2
65°	161.0	61.9	6.0	2.2	1.6
67.5°	139.7	42.2	3.8	1.1	0.5
70°	117.8	25.7	2.2	0.5	0.5
72.5°	97.0	13.1	1.1	0.5	0.5
75°	76.7	8.2	0.5	0.5	0.0
77.5°	57.0	4.4	0.5	0.5	0.0
80°	38.9	1.6	0.0	0.0	0.0
82.5°	22.5	0.5	0.0	0.0	0.0
85°	8.2	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	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	16.00	17.33	16.37	17.65	17.96	0.00	0.00	0.00	0.00	0.00
	3H	17.55	18.72	17.93	19.05	19.42	0.00	0.00	0.00	0.00	0.00
	4H	18.14	19.24	18.54	19.59	19.97	0.00	0.00	0.00	0.00	0.00
	6H	18.56	19.56	18.97	19.94	20.33	0.00	0.00	0.00	0.00	0.00
	8H	18.66	19.61	19.09	20.00	20.41	0.00	0.00	0.00	0.00	0.00
	12H	18.68	19.59	19.11	19.97	20.40	0.00	0.00	0.00	0.00	0.00
4H	2H	15.78	16.88	16.18	17.23	17.61	0.00	0.00	0.00	0.00	0.00
	3H	17.35	18.24	17.76	18.64	19.05	0.00	0.00	0.00	0.00	0.00
	4H	17.93	18.73	18.36	19.15	19.59	0.00	0.00	0.00	0.00	0.00
	6H	18.39	19.08	18.85	19.52	19.99	0.00	0.00	0.00	0.00	0.00
	8H	18.51	19.15	18.98	19.60	20.07	0.00	0.00	0.00	0.00	0.00
	12H	18.55	19.12	19.04	19.60	20.07	0.00	0.00	0.00	0.00	0.00
8H	4H	17.79	18.43	18.26	18.88	19.35	0.00	0.00	0.00	0.00	0.00
	6H	18.23	18.76	18.74	19.25	19.73	0.00	0.00	0.00	0.00	0.00
	8H	18.35	18.82	18.87	19.33	19.83	0.00	0.00	0.00	0.00	0.00
	12H	18.40	18.81	18.92	19.31	19.88	0.00	0.00	0.00	0.00	0.00
12H	4H	17.75	18.31	18.23	18.80	19.27	0.00	0.00	0.00	0.00	0.00
	6H	18.17	18.64	18.69	19.16	19.65	0.00	0.00	0.00	0.00	0.00
	8H	18.31	18.72	18.82	19.21	19.79	0.00	0.00	0.00	0.00	0.00