

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: P1056052

Luminaire Tested: S124R3DR-S575D935-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056052
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-S575D935-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

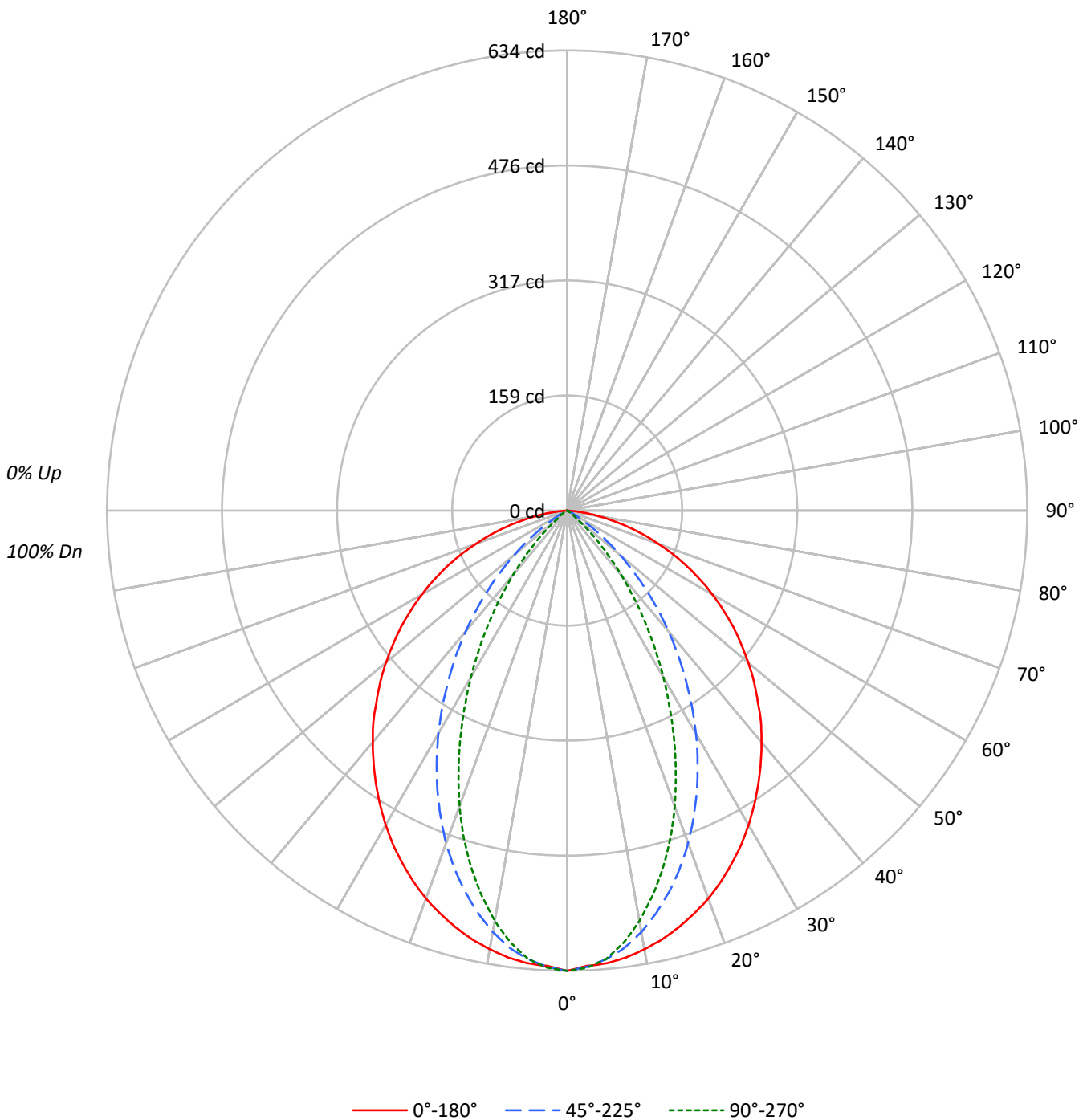
Lumens per Lamp: N/A
Luminaire Lumens: 886.4 lumens
Efficiency: N/A
Efficacy: 46.4 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	5607	5607	5607
5°	5557	5507	5502
10°	5510	5291	5152
15°	5441	4974	4666
20°	5353	4587	4078
25°	5235	4130	3403
30°	5104	3624	2704
35°	4960	3074	2013
40°	4808	2505	1342
45°	4641	1913	739
50°	4481	1308	205
55°	4304	709	134
60°	4090	219	78
65°	3824	142	40
70°	3456	65	16
75°	2972	20	0
80°	2245	0	0
85°	943	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4641 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.5	6.6
10°-20°	153.6	17.3
20°-30°	198.5	22.4
30°-40°	189.7	21.4
40°-50°	141.9	16.0
50°-60°	84.4	9.5
60°-70°	42.9	4.8
70°-80°	14.9	1.7
80°-90°	2.0	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°	410.6	46.3
0°-40°	600.3	67.7
0°-60°	826.6	93.3
0°-90°	886.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	886.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	634	634	634	634	634	
5°	626	631	620	617	620	59
15°	594	582	543	518	510	167
25°	537	499	423	368	349	247
35°	460	396	285	212	186	287
45°	371	285	153	82	59	287
55°	279	174	46	11	9	249
65°	183	70	7	2	2	181
75°	87	9	1	1	0	92
85°	9	0	0	0	0	15
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	634.2	634.2	634.2	634.2	634.2
2.5°	628.0	635.4	629.2	629.8	630.5
5°	626.1	631.1	620.5	617.4	619.9
7.5°	621.1	623.0	607.5	599.4	600.0
10°	613.7	611.8	589.4	575.8	573.9
12.5°	605.0	598.8	567.7	547.8	543.4
15°	594.4	582.0	543.4	517.9	509.8
17.5°	582.0	563.9	516.7	483.1	473.2
20°	568.9	544.0	487.5	445.8	433.4
22.5°	553.4	521.7	455.8	406.6	391.1
25°	536.6	499.3	423.4	367.5	348.8
27.5°	519.2	475.0	389.2	327.7	305.9
30°	499.9	449.5	355.0	287.3	264.9
32.5°	480.0	423.4	319.6	249.9	225.1
35°	459.5	396.1	284.8	212.0	186.5
37.5°	438.3	368.7	251.2	176.0	149.8
40°	416.6	340.7	217.0	141.8	116.3
42.5°	395.4	312.7	184.7	109.4	85.8
45°	371.2	284.8	153.0	81.5	59.1
47.5°	349.4	257.4	122.5	55.3	34.8
50°	325.8	228.2	95.1	32.3	14.9
52.5°	302.2	200.8	69.6	14.3	11.2
55°	279.2	173.5	46.0	10.6	8.7
57.5°	254.9	146.1	24.9	8.1	6.2
60°	231.3	119.4	12.4	6.2	4.4
62.5°	207.0	93.9	9.9	3.7	2.5
65°	182.8	70.3	6.8	2.5	1.9
67.5°	158.5	47.9	4.4	1.2	0.6
70°	133.7	29.2	2.5	0.6	0.6
72.5°	110.1	14.9	1.2	0.6	0.6
75°	87.0	9.3	0.6	0.6	0.0
77.5°	64.7	5.0	0.6	0.6	0.0
80°	44.1	1.9	0.0	0.0	0.0
82.5°	25.5	0.6	0.0	0.0	0.0
85°	9.3	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	16.44	17.77	16.81	18.09	18.40	0.00	0.00	0.00	0.00	0.00
	3H	17.99	19.16	18.37	19.49	19.86	0.00	0.00	0.00	0.00	0.00
	4H	18.58	19.68	18.98	20.03	20.41	0.00	0.00	0.00	0.00	0.00
	6H	19.00	20.00	19.41	20.37	20.77	0.00	0.00	0.00	0.00	0.00
	8H	19.10	20.05	19.53	20.44	20.85	0.00	0.00	0.00	0.00	0.00
	12H	19.12	20.03	19.55	20.41	20.84	0.00	0.00	0.00	0.00	0.00
4H	2H	16.22	17.32	16.62	17.67	18.05	0.00	0.00	0.00	0.00	0.00
	3H	17.79	18.68	18.20	19.08	19.49	0.00	0.00	0.00	0.00	0.00
	4H	18.37	19.17	18.80	19.59	20.03	0.00	0.00	0.00	0.00	0.00
	6H	18.83	19.52	19.29	19.96	20.43	0.00	0.00	0.00	0.00	0.00
	8H	18.95	19.59	19.42	20.04	20.51	0.00	0.00	0.00	0.00	0.00
	12H	18.99	19.55	19.48	20.04	20.51	0.00	0.00	0.00	0.00	0.00
8H	4H	18.23	18.87	18.70	19.32	19.79	0.00	0.00	0.00	0.00	0.00
	6H	18.67	19.20	19.18	19.69	20.17	0.00	0.00	0.00	0.00	0.00
	8H	18.79	19.26	19.31	19.77	20.27	0.00	0.00	0.00	0.00	0.00
	12H	18.84	19.25	19.35	19.75	20.32	0.00	0.00	0.00	0.00	0.00
12H	4H	18.19	18.75	18.67	19.24	19.71	0.00	0.00	0.00	0.00	0.00
	6H	18.61	19.08	19.13	19.60	20.09	0.00	0.00	0.00	0.00	0.00
	8H	18.75	19.16	19.26	19.65	20.23	0.00	0.00	0.00	0.00	0.00