

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: P1056058

Luminaire Tested: S124R3DR-S575D950-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056058
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-S575D950-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

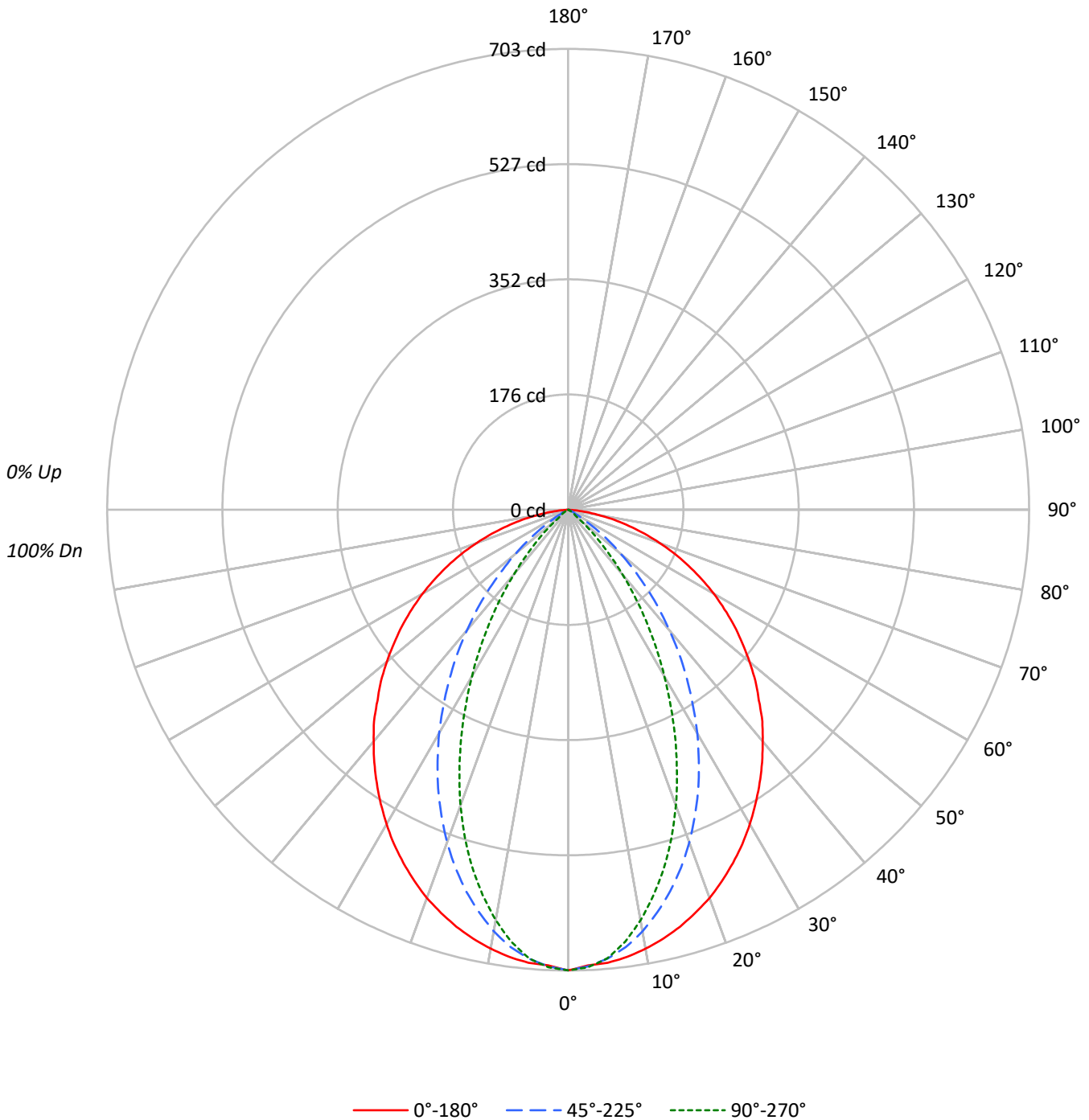
Lumens per Lamp: N/A
Luminaire Lumens: 982.1 lumens
Efficiency: N/A
Efficacy: 51.4 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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°	6213	6213	6213
5°	6157	6102	6096
10°	6105	5863	5709
15°	6028	5511	5171
20°	5931	5082	4518
25°	5800	4577	3770
30°	5655	4016	2996
35°	5495	3405	2231
40°	5328	2775	1487
45°	5143	2119	818
50°	4965	1450	227
55°	4768	786	148
60°	4532	244	85
65°	4236	159	44
70°	3828	72	18
75°	3293	24	0
80°	2490	0	0
85°	1045	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5143 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.8	6.6
10°-20°	170.2	17.3
20°-30°	219.9	22.4
30°-40°	210.2	21.4
40°-50°	157.2	16.0
50°-60°	93.6	9.5
60°-70°	47.5	4.8
70°-80°	16.5	1.7
80°-90°	2.3	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°	454.9	46.3
0°-40°	665.1	67.7
0°-60°	915.9	93.3
0°-90°	982.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	982.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	694	699	688	684	687	66
15°	659	645	602	574	565	186
25°	594	553	469	407	386	274
35°	509	439	316	235	207	318
45°	411	316	170	90	65	318
55°	309	192	51	12	10	276
65°	202	78	8	3	2	200
75°	96	10	1	1	0	102
85°	10	0	0	0	0	17
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	702.7	702.7	702.7	702.7	702.7
2.5°	695.8	704.1	697.2	697.9	698.6
5°	693.7	699.3	687.5	684.1	686.9
7.5°	688.2	690.3	673.1	664.1	664.8
10°	680.0	677.9	653.1	637.9	635.9
12.5°	670.3	663.4	629.0	606.9	602.1
15°	658.6	644.8	602.1	573.9	564.9
17.5°	644.8	624.9	572.5	535.3	524.3
20°	630.4	602.8	540.1	494.0	480.2
22.5°	613.1	578.0	505.0	450.6	433.3
25°	594.5	553.2	469.2	407.2	386.5
27.5°	575.3	526.3	431.3	363.1	339.0
30°	553.9	498.1	393.4	318.3	293.5
32.5°	531.8	469.2	354.1	276.9	249.4
35°	509.1	438.8	315.5	234.9	206.7
37.5°	485.7	408.5	278.3	195.0	166.0
40°	461.6	377.5	240.4	157.1	128.8
42.5°	438.2	346.5	204.6	121.3	95.1
45°	411.3	315.5	169.5	90.2	65.4
47.5°	387.2	285.2	135.7	61.3	38.6
50°	361.0	252.8	105.4	35.8	16.5
52.5°	334.8	222.5	77.2	15.8	12.4
55°	309.3	192.2	51.0	11.7	9.6
57.5°	282.5	161.9	27.6	9.0	6.9
60°	256.3	132.3	13.8	6.9	4.8
62.5°	229.4	104.0	11.0	4.1	2.8
65°	202.5	77.8	7.6	2.8	2.1
67.5°	175.7	53.0	4.8	1.4	0.7
70°	148.1	32.4	2.8	0.7	0.7
72.5°	121.9	16.5	1.4	0.7	0.7
75°	96.4	10.3	0.7	0.7	0.0
77.5°	71.6	5.5	0.7	0.7	0.0
80°	48.9	2.1	0.0	0.0	0.0
82.5°	28.2	0.7	0.0	0.0	0.0
85°	10.3	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	16.80	18.13	17.17	18.44	18.76	0.00	0.00	0.00	0.00	0.00
	3H	18.34	19.52	18.72	19.85	20.22	0.00	0.00	0.00	0.00	0.00
	4H	18.94	20.03	19.34	20.38	20.77	0.00	0.00	0.00	0.00	0.00
	6H	19.35	20.36	19.77	20.73	21.12	0.00	0.00	0.00	0.00	0.00
	8H	19.45	20.40	19.88	20.80	21.20	0.00	0.00	0.00	0.00	0.00
	12H	19.47	20.38	19.90	20.76	21.19	0.00	0.00	0.00	0.00	0.00
4H	2H	16.58	17.68	16.98	18.03	18.41	0.00	0.00	0.00	0.00	0.00
	3H	18.14	19.04	18.56	19.44	19.84	0.00	0.00	0.00	0.00	0.00
	4H	18.73	19.52	19.16	19.94	20.39	0.00	0.00	0.00	0.00	0.00
	6H	19.18	19.87	19.65	20.32	20.78	0.00	0.00	0.00	0.00	0.00
	8H	19.30	19.95	19.77	20.39	20.86	0.00	0.00	0.00	0.00	0.00
	12H	19.34	19.91	19.83	20.39	20.87	0.00	0.00	0.00	0.00	0.00
8H	4H	18.59	19.23	19.06	19.68	20.15	0.00	0.00	0.00	0.00	0.00
	6H	19.03	19.55	19.53	20.05	20.53	0.00	0.00	0.00	0.00	0.00
	8H	19.15	19.61	19.67	20.13	20.62	0.00	0.00	0.00	0.00	0.00
	12H	19.19	19.61	19.71	20.10	20.67	0.00	0.00	0.00	0.00	0.00
12H	4H	18.54	19.11	19.03	19.59	20.07	0.00	0.00	0.00	0.00	0.05
	6H	18.97	19.44	19.49	19.95	20.44	0.00	0.00	0.00	0.00	0.00
	8H	19.10	19.51	19.62	20.01	20.58	0.00	0.00	0.00	0.00	0.00