

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: P1056049

Luminaire Tested: S124R3DR-S575D930-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056049
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-S575D930-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

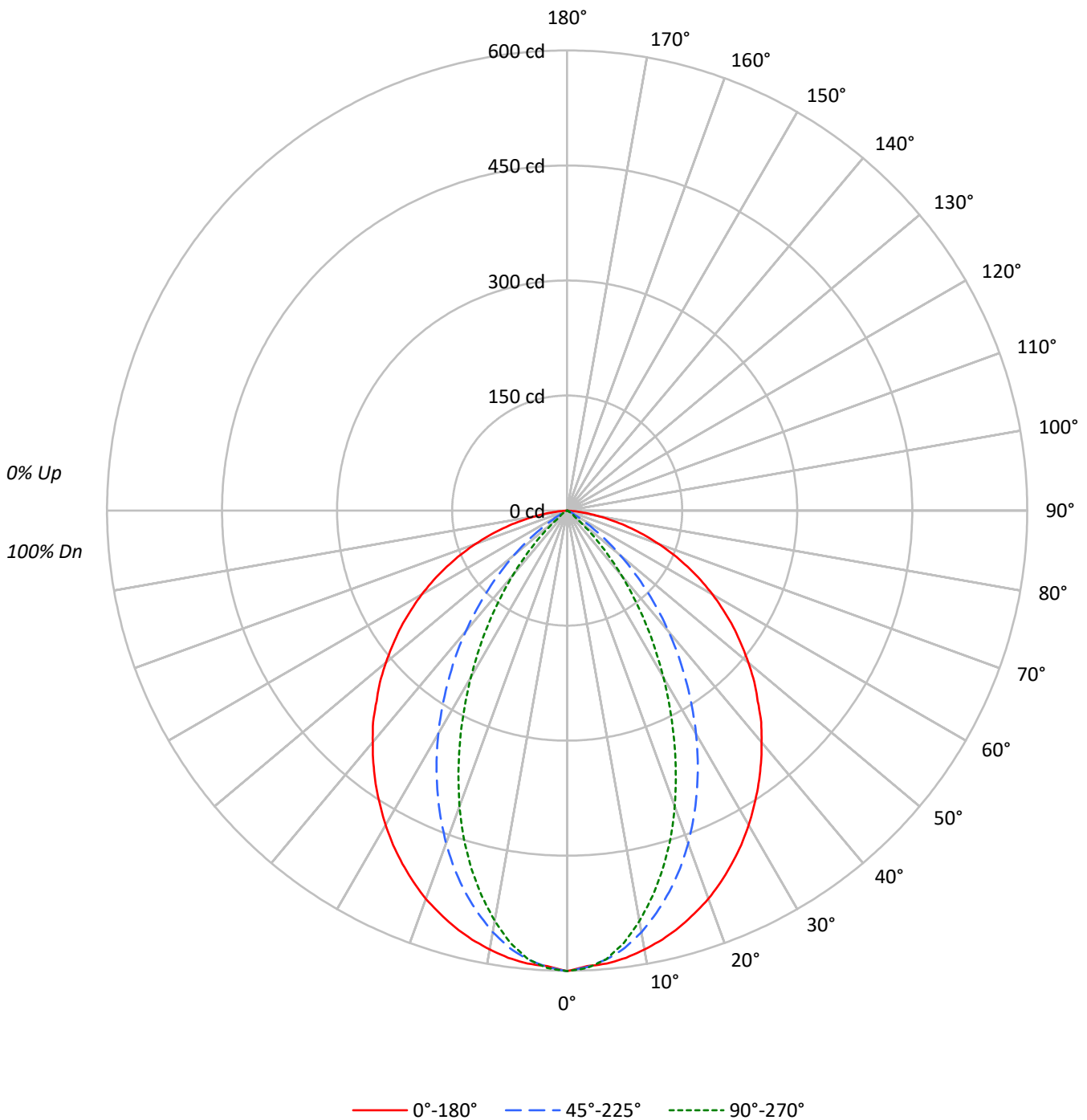
Lumens per Lamp: N/A
Luminaire Lumens: 839.4 lumens
Efficiency: N/A
Efficacy: 43.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	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					100			
1	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90					90			
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80					80			
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71					71			
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64					64			
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57					57			
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52					52			
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47					47			
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43					43			
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40					40			
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37					37			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5309	5309	5309
5°	5262	5215	5210
10°	5217	5010	4879
15°	5152	4710	4419
20°	5069	4343	3861
25°	4957	3911	3222
30°	4833	3432	2560
35°	4696	2911	1906
40°	4553	2372	1271
45°	4395	1811	699
50°	4243	1239	194
55°	4076	672	126
60°	3873	209	72
65°	3621	136	38
70°	3273	62	16
75°	2815	20	0
80°	2128	0	0
85°	893	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4395 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.4	6.6
10°-20°	145.4	17.3
20°-30°	188.0	22.4
30°-40°	179.6	21.4
40°-50°	134.3	16.0
50°-60°	80.0	9.5
60°-70°	40.6	4.8
70°-80°	14.1	1.7
80°-90°	1.9	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°	388.8	46.3
0°-40°	568.4	67.7
0°-60°	782.7	93.3
0°-90°	839.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	839.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	600	600	600	600	600	
5°	593	598	588	585	587	56
15°	563	551	515	490	483	159
25°	508	473	401	348	330	234
35°	435	375	270	201	177	272
45°	352	270	145	77	56	272
55°	264	164	44	10	8	236
65°	173	66	6	2	2	171
75°	82	9	1	1	0	87
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°	600.5	600.5	600.5	600.5	600.5
2.5°	594.6	601.7	595.8	596.4	597.0
5°	592.9	597.6	587.6	584.6	587.0
7.5°	588.2	589.9	575.2	567.6	568.2
10°	581.1	579.3	558.1	545.2	543.4
12.5°	572.9	567.0	537.5	518.7	514.6
15°	562.9	551.1	514.6	490.4	482.8
17.5°	551.1	534.0	489.3	457.5	448.0
20°	538.7	515.2	461.6	422.1	410.4
22.5°	524.0	494.0	431.6	385.1	370.3
25°	508.1	472.8	400.9	348.0	330.3
27.5°	491.6	449.8	368.6	310.3	289.7
30°	473.4	425.7	336.2	272.0	250.8
32.5°	454.5	400.9	302.6	236.7	213.1
35°	435.1	375.0	269.7	200.8	176.6
37.5°	415.1	349.1	237.9	166.6	141.9
40°	394.5	322.6	205.5	134.2	110.1
42.5°	374.5	296.1	174.9	103.6	81.2
45°	351.5	269.7	144.8	77.1	55.9
47.5°	330.9	243.7	116.0	52.4	33.0
50°	308.5	216.1	90.1	30.6	14.1
52.5°	286.1	190.2	65.9	13.5	10.6
55°	264.4	164.3	43.6	10.0	8.2
57.5°	241.4	138.4	23.6	7.7	5.9
60°	219.0	113.0	11.8	5.9	4.1
62.5°	196.1	88.9	9.4	3.5	2.4
65°	173.1	66.5	6.5	2.4	1.8
67.5°	150.1	45.3	4.1	1.2	0.6
70°	126.6	27.7	2.4	0.6	0.6
72.5°	104.2	14.1	1.2	0.6	0.6
75°	82.4	8.8	0.6	0.6	0.0
77.5°	61.2	4.7	0.6	0.6	0.0
80°	41.8	1.8	0.0	0.0	0.0
82.5°	24.1	0.6	0.0	0.0	0.0
85°	8.8	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	16.26	17.59	16.62	17.90	18.21	0.00	0.00	0.00	0.00	0.00
	3H	17.80	18.98	18.18	19.31	19.67	0.00	0.00	0.00	0.00	0.00
	4H	18.39	19.49	18.79	19.84	20.22	0.00	0.00	0.00	0.00	0.00
	6H	18.81	19.81	19.22	20.18	20.58	0.00	0.00	0.00	0.00	0.00
	8H	18.91	19.86	19.34	20.25	20.66	0.00	0.00	0.00	0.00	0.00
	12H	18.93	19.84	19.36	20.22	20.65	0.00	0.00	0.00	0.00	0.00
4H	2H	16.03	17.13	16.44	17.48	17.86	0.00	0.00	0.00	0.00	0.00
	3H	17.60	18.49	18.01	18.89	19.30	0.00	0.00	0.00	0.00	0.00
	4H	18.18	18.98	18.61	19.40	19.84	0.00	0.00	0.00	0.00	0.00
	6H	18.64	19.33	19.10	19.77	20.24	0.00	0.00	0.00	0.00	0.00
	8H	18.76	19.40	19.23	19.85	20.32	0.00	0.00	0.00	0.00	0.00
	12H	18.80	19.36	19.29	19.85	20.32	0.00	0.00	0.00	0.00	0.00
8H	4H	18.04	18.68	18.51	19.13	19.60	0.00	0.00	0.00	0.00	0.00
	6H	18.48	19.01	18.99	19.50	19.98	0.00	0.00	0.00	0.00	0.00
	8H	18.60	19.07	19.12	19.58	20.08	0.00	0.00	0.00	0.00	0.00
	12H	18.65	19.06	19.16	19.56	20.13	0.00	0.00	0.00	0.00	0.00
12H	4H	18.00	18.56	18.48	19.05	19.52	0.00	0.00	0.00	0.00	0.00
	6H	18.42	18.89	18.94	19.41	19.90	0.00	0.00	0.00	0.00	0.00
	8H	18.56	18.97	19.07	19.46	20.04	0.00	0.00	0.00	0.00	0.00