

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1056195

Luminaire Tested: S124R3DR-H575D950-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1056195
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-7)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124R3DR-H575D950-X4F0-XX-UDD-FLL-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

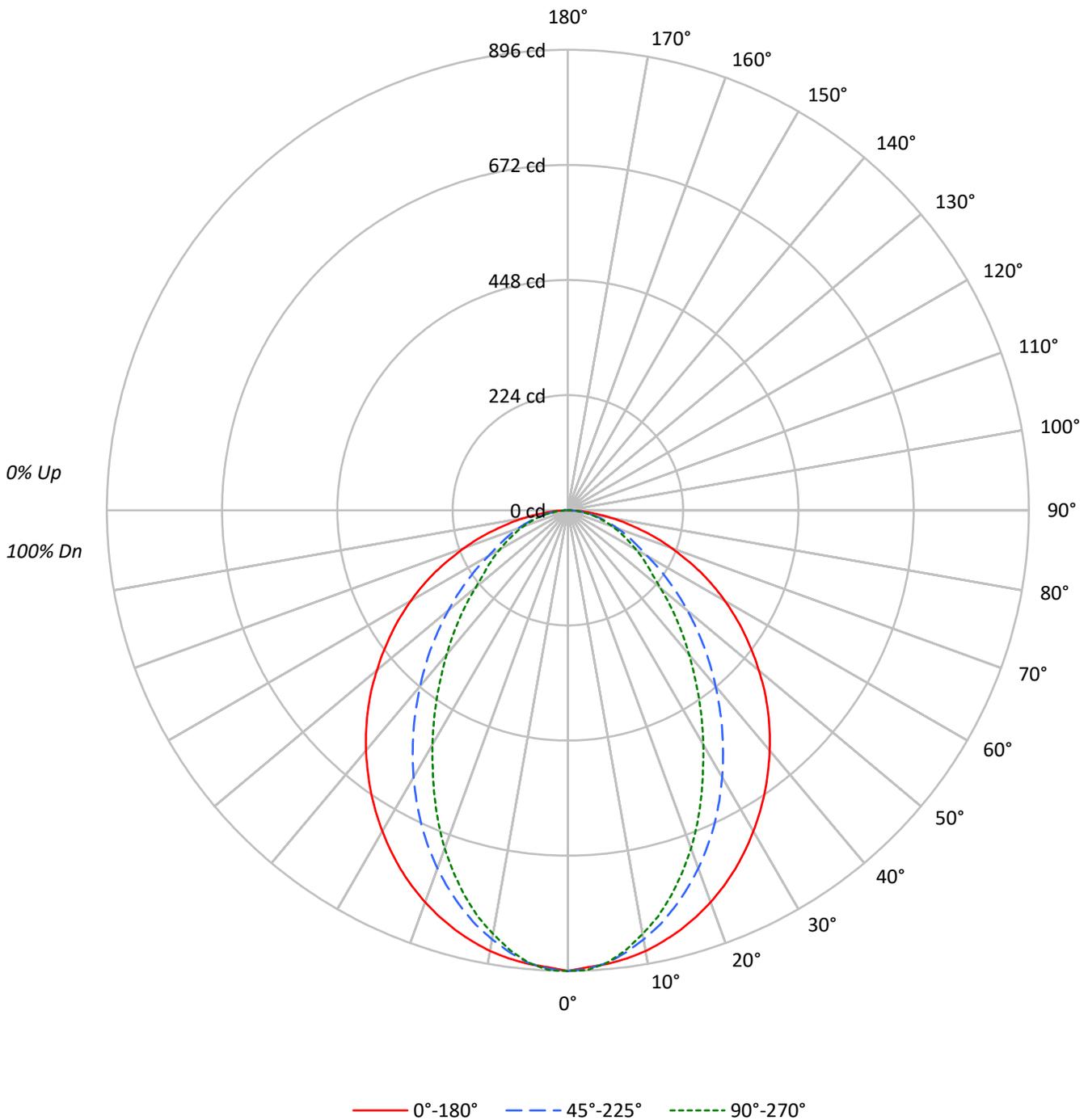
Lumens per Lamp: N/A
Luminaire Lumens: 1785.5 lumens
Efficiency: N/A
Efficacy: 103.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7926	7926	7926
5°	7862	7845	7839
10°	7817	7610	7515
15°	7735	7324	7100
20°	7634	6976	6585
25°	7510	6577	5985
30°	7361	6121	5374
35°	7206	5646	4785
40°	7043	5154	4233
45°	6871	4676	3720
50°	6660	4173	3212
55°	6457	3670	2918
60°	6230	3149	2705
65°	5948	2856	2525
70°	5524	2642	2389
75°	5001	2432	2255
80°	4369	2250	2118
85°	3348	2069	1938

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6871 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.5	4.7
10°-20°	226.4	12.7
20°-30°	313.5	17.6
30°-40°	336.5	18.8
40°-50°	306.0	17.1
50°-60°	240.9	13.5
60°-70°	164.9	9.2
70°-80°	88.8	5.0
80°-90°	25.1	1.4
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°	623.3	34.9
0°-40°	959.8	53.8
0°-60°	1506.7	84.4
0°-90°	1785.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1785.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	896	896	896	896	896	
5°	886	896	884	879	883	84
15°	845	836	800	778	776	238
25°	770	738	674	625	614	354
35°	668	615	523	460	443	418
45°	550	480	374	309	298	424
55°	419	339	238	192	189	375
65°	284	203	136	121	121	281
75°	146	89	71	65	66	156
85°	33	22	20	19	19	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	896.5	896.5	896.5	896.5	896.5
2.5°	889.9	900.4	892.5	893.8	895.1
5°	885.9	895.8	883.9	879.3	883.3
7.5°	879.3	885.9	867.4	858.9	862.8
10°	870.7	872.1	847.6	835.1	837.1
12.5°	858.9	855.6	825.9	808.1	809.4
15°	845.0	835.8	800.1	778.4	775.7
17.5°	829.2	814.0	771.8	744.1	738.8
20°	811.4	790.9	741.4	705.8	699.9
22.5°	791.6	765.2	708.5	666.2	657.7
25°	769.8	738.1	674.2	625.3	613.5
27.5°	746.1	709.1	637.2	583.8	568.6
30°	721.0	678.8	599.6	542.2	526.4
32.5°	695.3	647.8	561.4	500.7	484.2
35°	667.6	615.4	523.1	459.8	443.3
37.5°	639.2	581.8	484.2	420.2	403.0
40°	610.2	548.2	446.6	380.6	366.8
42.5°	580.5	513.9	409.6	343.7	331.1
45°	549.5	479.6	374.0	309.4	297.5
47.5°	517.8	444.6	337.7	277.1	265.8
50°	484.2	409.6	303.4	245.4	233.5
52.5°	451.9	374.0	270.5	214.4	208.4
55°	418.9	339.1	238.1	192.0	189.3
57.5°	385.9	304.1	208.4	174.1	171.5
60°	352.3	269.8	178.1	155.7	153.0
62.5°	318.6	236.2	155.7	137.9	136.5
65°	284.3	203.2	136.5	121.4	120.7
67.5°	248.0	171.5	119.4	106.9	106.2
70°	213.7	139.8	102.2	92.4	92.4
72.5°	181.4	110.8	86.4	78.5	78.5
75°	146.4	89.1	71.2	65.3	66.0
77.5°	115.4	69.9	57.4	53.4	53.4
80°	85.8	52.1	44.2	40.9	41.6
82.5°	58.0	36.3	31.7	29.7	29.7
85°	33.0	22.4	20.4	19.1	19.1
87.5°	11.9	10.6	9.9	8.6	9.2
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	18.33	19.86	18.70	20.17	20.49	14.11	15.63	14.48	15.95	16.26
	3H	20.11	21.48	20.49	21.81	22.17	15.72	17.09	16.10	17.42	17.78
	4H	20.78	22.07	21.18	22.42	22.79	16.35	17.64	16.75	17.99	18.37
	6H	21.29	22.48	21.70	22.84	23.24	16.85	18.04	17.27	18.41	18.80
	8H	21.45	22.58	21.88	22.97	23.38	17.02	18.16	17.45	18.55	18.95
	12H	21.55	22.64	21.98	23.02	23.45	17.15	18.23	17.58	18.61	19.04
4H	2H	18.43	19.72	18.83	20.06	20.44	14.83	16.11	15.23	16.46	16.84
	3H	20.37	21.44	20.78	21.84	22.24	16.64	17.71	17.05	18.11	18.51
	4H	21.13	22.09	21.56	22.51	22.95	17.37	18.34	17.81	18.75	19.19
	6H	21.76	22.60	22.22	23.05	23.51	17.99	18.83	18.45	19.27	19.73
	8H	21.98	22.77	22.45	23.21	23.68	18.21	18.99	18.67	19.44	19.90
	12H	22.14	22.84	22.62	23.32	23.79	18.37	19.08	18.86	19.55	20.02
8H	4H	21.19	21.97	21.65	22.42	22.88	17.76	18.55	18.23	18.99	19.46
	6H	21.89	22.53	22.38	23.03	23.50	18.49	19.14	18.99	19.63	20.11
	8H	22.15	22.74	22.67	23.25	23.73	18.78	19.37	19.30	19.88	20.36
	12H	22.37	22.89	22.88	23.38	23.94	19.03	19.54	19.54	20.04	20.60
12H	4H	21.18	21.88	21.66	22.36	22.83	17.82	18.52	18.30	19.00	19.47
	6H	21.88	22.46	22.39	22.97	23.46	18.58	19.16	19.09	19.67	20.16
	8H	22.19	22.70	22.70	23.19	23.76	18.93	19.44	19.44	19.93	20.50