

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: P1056024

Luminaire Tested: S124R3DR-S350D930-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056024
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-S350D930-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

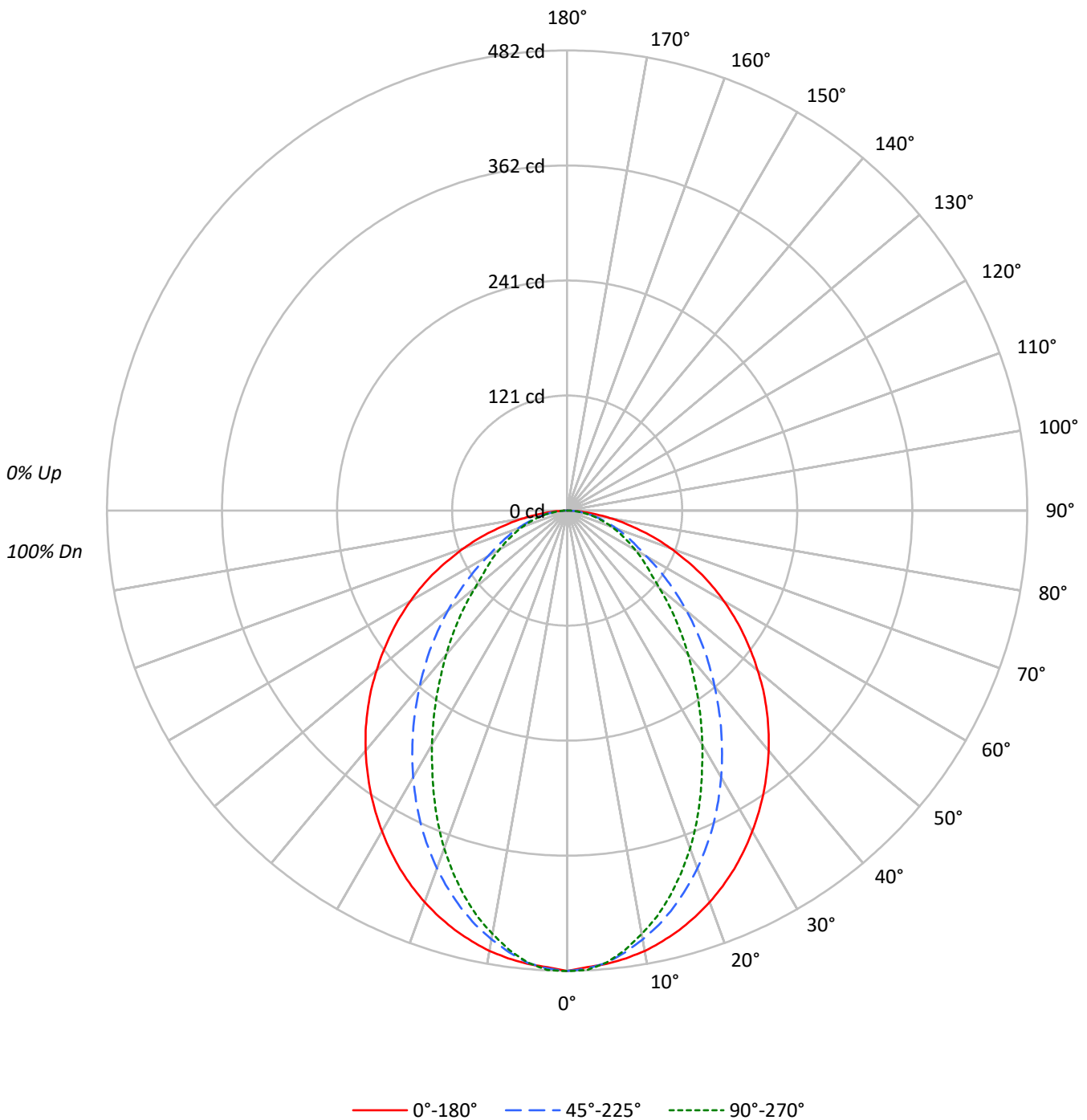
Lumens per Lamp: N/A
Luminaire Lumens: 960.5 lumens
Efficiency: N/A
Efficacy: 76.2 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (Ain): 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	110	105	102	98	107	103	100	97	99	96	93	95	93	91	92	90	88	86					86			
2	101	93	87	82	98	91	86	81	88	83	79	85	81	77	82	78	76	73					73			
3	93	83	75	69	90	81	74	69	79	73	68	76	71	67	73	69	65	63					63			
4	85	74	66	60	83	73	65	60	71	64	59	68	63	58	66	61	57	55					55			
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49					49			
6	73	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43					43			
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39					39			
8	64	51	43	38	62	51	43	38	49	42	37	48	42	37	47	41	37	35					35			
9	60	47	39	34	59	47	39	34	46	39	34	45	38	34	44	38	34	32					32			
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29					29			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4264	4264	4264
5°	4230	4220	4217
10°	4205	4094	4043
15°	4161	3940	3820
20°	4107	3753	3542
25°	4040	3538	3219
30°	3960	3293	2891
35°	3876	3037	2574
40°	3789	2772	2277
45°	3696	2516	2001
50°	3583	2245	1728
55°	3473	1975	1569
60°	3351	1694	1455
65°	3199	1538	1358
70°	2973	1422	1285
75°	2692	1308	1213
80°	2347	1212	1141
85°	1796	1116	1045

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3696 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.9	4.7
10°-20°	121.8	12.7
20°-30°	168.6	17.6
30°-40°	181.0	18.8
40°-50°	164.6	17.1
50°-60°	129.6	13.5
60°-70°	88.7	9.2
70°-80°	47.7	5.0
80°-90°	13.5	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°	335.3	34.9
0°-40°	516.3	53.8
0°-60°	810.5	84.4
0°-90°	960.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	960.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	482	482	482	482	482	
5°	477	482	476	473	475	45
15°	455	450	430	419	417	128
25°	414	397	363	336	330	191
35°	359	331	281	247	238	225
45°	296	258	201	166	160	228
55°	225	182	128	103	102	201
65°	153	109	74	65	65	151
75°	79	48	38	35	36	84
85°	18	12	11	10	10	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	482.3	482.3	482.3	482.3	482.3
2.5°	478.7	484.4	480.1	480.8	481.6
5°	476.6	481.9	475.5	473.0	475.2
7.5°	473.0	476.6	466.6	462.0	464.2
10°	468.4	469.1	456.0	449.3	450.3
12.5°	462.0	460.3	444.3	434.7	435.4
15°	454.6	449.6	430.5	418.7	417.3
17.5°	446.1	437.9	415.2	400.3	397.5
20°	436.5	425.5	398.9	379.7	376.5
22.5°	425.8	411.6	381.1	358.4	353.8
25°	414.1	397.1	362.7	336.4	330.0
27.5°	401.4	381.5	342.8	314.1	305.9
30°	387.9	365.2	322.6	291.7	283.2
32.5°	374.0	348.5	302.0	269.3	260.5
35°	359.1	331.1	281.4	247.3	238.5
37.5°	343.9	313.0	260.5	226.0	216.8
40°	328.3	294.9	240.2	204.8	197.3
42.5°	312.3	276.4	220.4	184.9	178.1
45°	295.6	258.0	201.2	166.4	160.0
47.5°	278.6	239.2	181.7	149.0	143.0
50°	260.5	220.4	163.2	132.0	125.6
52.5°	243.1	201.2	145.5	115.3	112.1
55°	225.3	182.4	128.1	103.3	101.8
57.5°	207.6	163.6	112.1	93.7	92.3
60°	189.5	145.1	95.8	83.7	82.3
62.5°	171.4	127.0	83.7	74.2	73.5
65°	152.9	109.3	73.5	65.3	64.9
67.5°	133.4	92.3	64.2	57.5	57.1
70°	115.0	75.2	55.0	49.7	49.7
72.5°	97.6	59.6	46.5	42.2	42.2
75°	78.8	47.9	38.3	35.1	35.5
77.5°	62.1	37.6	30.9	28.7	28.7
80°	46.1	28.0	23.8	22.0	22.4
82.5°	31.2	19.5	17.0	16.0	16.0
85°	17.7	12.1	11.0	10.3	10.3
87.5°	6.4	5.7	5.3	4.6	5.0
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	16.18	17.70	16.55	18.02	18.33	11.96	13.48	12.32	13.80	14.11
	3H	17.96	19.33	18.33	19.65	20.01	13.57	14.94	13.95	15.27	15.63
	4H	18.63	19.91	19.03	20.26	20.64	14.20	15.49	14.60	15.84	16.21
	6H	19.14	20.32	19.55	20.69	21.08	14.70	15.89	15.11	16.25	16.65
	8H	19.30	20.43	19.72	20.82	21.22	14.87	16.00	15.30	16.39	16.79
	12H	19.40	20.48	19.83	20.86	21.29	14.99	16.08	15.42	16.46	16.89
4H	2H	16.28	17.56	16.68	17.91	18.29	12.68	13.96	13.08	14.31	14.69
	3H	18.22	19.29	18.63	19.69	20.09	14.48	15.55	14.90	15.95	16.36
	4H	18.98	19.94	19.41	20.36	20.79	15.22	16.18	15.65	16.60	17.04
	6H	19.61	20.45	20.07	20.89	21.35	15.84	16.68	16.29	17.12	17.58
	8H	19.83	20.61	20.29	21.06	21.53	16.05	16.84	16.52	17.28	17.75
	12H	19.98	20.69	20.47	21.16	21.63	16.22	16.92	16.70	17.40	17.87
8H	4H	19.03	19.82	19.50	20.26	20.73	15.61	16.39	16.07	16.84	17.31
	6H	19.73	20.38	20.23	20.87	21.35	16.34	16.99	16.84	17.48	17.96
	8H	20.00	20.58	20.51	21.09	21.58	16.63	17.21	17.14	17.72	18.21
	12H	20.22	20.73	20.73	21.22	21.79	16.88	17.39	17.39	17.88	18.45
12H	4H	19.02	19.73	19.51	20.20	20.68	15.66	16.37	16.15	16.84	17.32
	6H	19.72	20.31	20.24	20.82	21.31	16.42	17.01	16.94	17.52	18.00
	8H	20.03	20.55	20.54	21.04	21.60	16.77	17.29	17.28	17.78	18.34