

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: P1056168

Luminaire Tested: S124R3DR-H350D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056168
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-H350D950-X4F0-XX-UDD-F-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

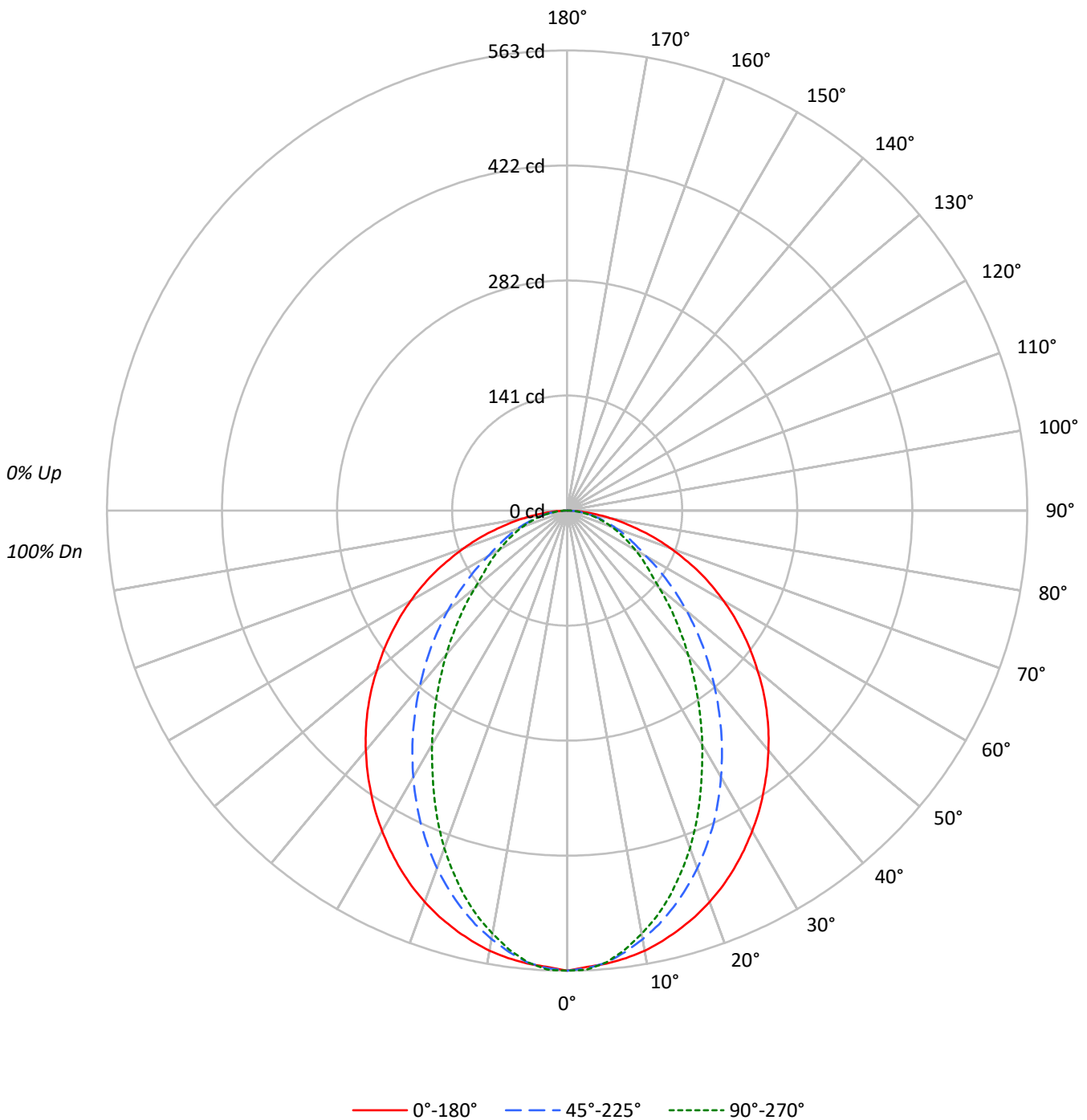
Lumens per Lamp: N/A
Luminaire Lumens: 1121.2 lumens
Efficiency: N/A
Efficacy: 95.8 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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°	4977	4977	4977
5°	4937	4927	4922
10°	4909	4779	4719
15°	4857	4599	4459
20°	4794	4381	4135
25°	4716	4129	3758
30°	4622	3844	3374
35°	4525	3546	3005
40°	4423	3236	2658
45°	4314	2937	2336
50°	4181	2620	2016
55°	4054	2304	1833
60°	3911	1977	1699
65°	3734	1793	1586
70°	3469	1660	1499
75°	3143	1527	1414
80°	2739	1415	1329
85°	2100	1298	1217

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4314 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.4	4.7
10°-20°	142.2	12.7
20°-30°	196.8	17.6
30°-40°	211.3	18.8
40°-50°	192.1	17.1
50°-60°	151.3	13.5
60°-70°	103.6	9.2
70°-80°	55.7	5.0
80°-90°	15.8	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°	391.4	34.9
0°-40°	602.7	53.8
0°-60°	946.1	84.4
0°-90°	1121.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1121.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	563	563	563	563	563	
5°	556	562	555	552	555	53
15°	531	525	502	489	487	150
25°	483	464	423	393	385	223
35°	419	386	328	289	278	262
45°	345	301	235	194	187	266
55°	263	213	150	120	119	235
65°	178	128	86	76	76	176
75°	92	56	45	41	41	98
85°	21	14	13	12	12	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	562.9	562.9	562.9	562.9	562.9
2.5°	558.8	565.4	560.4	561.3	562.1
5°	556.3	562.5	555.1	552.2	554.6
7.5°	552.2	556.3	544.7	539.3	541.8
10°	546.8	547.6	532.3	524.4	525.6
12.5°	539.3	537.2	518.6	507.4	508.2
15°	530.6	524.8	502.4	488.8	487.1
17.5°	520.7	511.1	484.6	467.2	463.9
20°	509.5	496.6	465.6	443.2	439.5
22.5°	497.1	480.5	444.9	418.4	413.0
25°	483.4	463.5	423.3	392.7	385.2
27.5°	468.5	445.3	400.1	366.6	357.1
30°	452.7	426.2	376.5	340.5	330.5
32.5°	436.6	406.8	352.5	314.4	304.0
35°	419.2	386.5	328.5	288.7	278.4
37.5°	401.4	365.3	304.0	263.9	253.1
40°	383.2	344.2	280.4	239.0	230.3
42.5°	364.5	322.7	257.2	215.8	207.9
45°	345.0	301.1	234.9	194.3	186.8
47.5°	325.2	279.2	212.1	174.0	166.9
50°	304.0	257.2	190.5	154.1	146.6
52.5°	283.7	234.9	169.8	134.6	130.9
55°	263.0	212.9	149.5	120.5	118.9
57.5°	242.3	191.0	130.9	109.4	107.7
60°	221.2	169.4	111.8	97.8	96.1
62.5°	200.1	148.3	97.8	86.6	85.7
65°	178.5	127.6	85.7	76.2	75.8
67.5°	155.7	107.7	75.0	67.1	66.7
70°	134.2	87.8	64.2	58.0	58.0
72.5°	113.9	69.6	54.3	49.3	49.3
75°	92.0	55.9	44.7	41.0	41.4
77.5°	72.5	43.9	36.0	33.6	33.6
80°	53.8	32.7	27.8	25.7	26.1
82.5°	36.5	22.8	19.9	18.6	18.6
85°	20.7	14.1	12.8	12.0	12.0
87.5°	7.5	6.6	6.2	5.4	5.8
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	16.72	18.24	17.08	18.56	18.87	12.50	14.02	12.86	14.34	14.65
	3H	18.49	19.86	18.87	20.19	20.55	14.11	15.48	14.49	15.81	16.17
	4H	19.16	20.45	19.56	20.80	21.18	14.74	16.02	15.14	16.37	16.75
	6H	19.67	20.86	20.09	21.23	21.62	15.24	16.43	15.65	16.79	17.19
	8H	19.84	20.97	20.26	21.36	21.76	15.41	16.54	15.84	16.93	17.33
	12H	19.94	21.02	20.37	21.40	21.83	15.53	16.61	15.96	17.00	17.43
4H	2H	16.81	18.10	17.21	18.45	18.83	13.21	14.50	13.61	14.85	15.23
	3H	18.76	19.83	19.17	20.23	20.63	15.02	16.09	15.43	16.49	16.89
	4H	19.51	20.48	19.95	20.89	21.33	15.76	16.72	16.19	17.14	17.58
	6H	20.15	20.99	20.60	21.43	21.89	16.38	17.22	16.83	17.66	18.12
	8H	20.37	21.15	20.83	21.60	22.06	16.59	17.38	17.05	17.82	18.29
	12H	20.52	21.22	21.00	21.70	22.17	16.76	17.46	17.24	17.94	18.41
8H	4H	19.57	20.36	20.03	20.80	21.27	16.15	16.93	16.61	17.38	17.84
	6H	20.27	20.92	20.77	21.41	21.89	16.88	17.53	17.38	18.02	18.50
	8H	20.54	21.12	21.05	21.63	22.12	17.17	17.75	17.68	18.26	18.75
	12H	20.76	21.27	21.26	21.76	22.33	17.41	17.93	17.92	18.42	18.98
12H	4H	19.56	20.26	20.04	20.74	21.21	16.20	16.90	16.68	17.38	17.85
	6H	20.26	20.85	20.78	21.36	21.84	16.96	17.55	17.48	18.06	18.54
	8H	20.57	21.09	21.08	21.58	22.14	17.31	17.83	17.82	18.32	18.88