

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: P1056171

Luminaire Tested: S124R3DR-H575D830-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056171
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-H575D830-X4F0-XX-UDD-F-W
Description: DEFINE 4, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

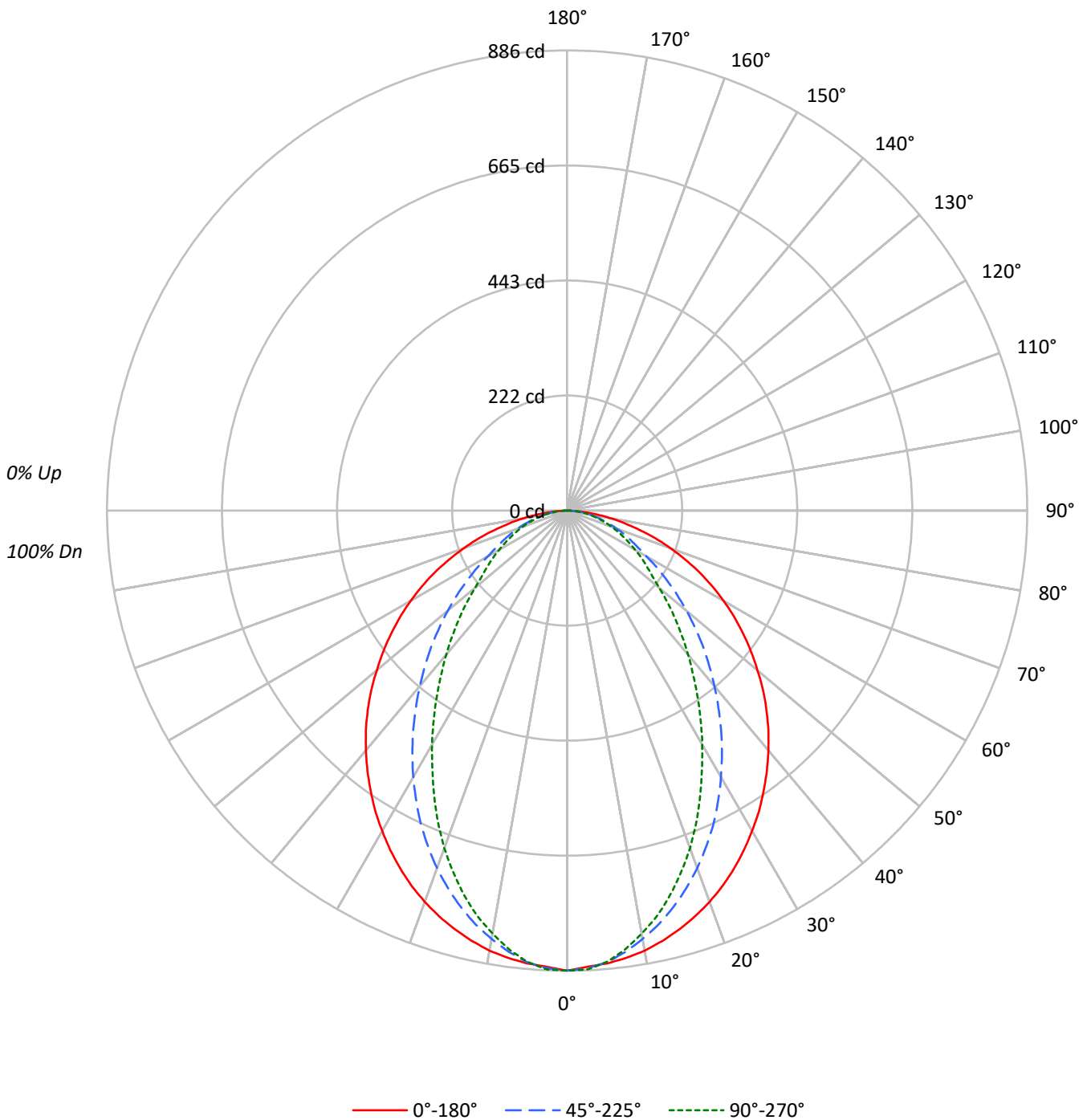
Lumens per Lamp: N/A
Luminaire Lumens: 1764.1 lumens
Efficiency: N/A
Efficacy: 102.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.95 / 1.12
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 17.3
Input Voltage (V): 120
Input Current (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

TEST NUMBER: P1056171

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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°	7831	7831	7831
5°	7768	7751	7745
10°	7724	7519	7425
15°	7642	7236	7015
20°	7542	6892	6506
25°	7420	6498	5913
30°	7272	6048	5310
35°	7118	5578	4727
40°	6957	5092	4183
45°	6788	4620	3675
50°	6580	4124	3173
55°	6379	3627	2883
60°	6154	3112	2674
65°	5877	2822	2496
70°	5460	2611	2358
75°	4943	2405	2227
80°	4313	2225	2093
85°	3307	2049	1917

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6788 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	82.5	4.7
10°-20°	223.7	12.7
20°-30°	309.7	17.6
30°-40°	332.4	18.8
40°-50°	302.3	17.1
50°-60°	238.0	13.5
60°-70°	162.9	9.2
70°-80°	87.7	5.0
80°-90°	24.8	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°	615.8	34.9
0°-40°	948.2	53.8
0°-60°	1488.6	84.4
0°-90°	1764.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1764.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	886	886	886	886	886	
5°	875	885	873	869	873	83
15°	835	826	790	769	766	235
25°	761	729	666	618	606	350
35°	660	608	517	454	438	413
45°	543	474	370	306	294	419
55°	414	335	235	190	187	370
65°	281	201	135	120	119	277
75°	145	88	70	64	65	154
85°	33	22	20	19	19	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	885.7	885.7	885.7	885.7	885.7
2.5°	879.2	889.6	881.8	883.1	884.4
5°	875.3	885.0	873.3	868.7	872.7
7.5°	868.7	875.3	857.0	848.5	852.5
10°	860.3	861.6	837.5	825.1	827.0
12.5°	848.5	845.3	816.0	798.4	799.7
15°	834.9	825.7	790.5	769.0	766.4
17.5°	819.2	804.2	762.5	735.1	729.9
20°	801.6	781.4	732.5	697.3	691.5
22.5°	782.1	756.0	700.0	658.2	649.8
25°	760.6	729.3	666.1	617.8	606.1
27.5°	737.1	700.6	629.6	576.8	561.8
30°	712.3	670.6	592.4	535.7	520.1
32.5°	686.9	640.0	554.6	494.7	478.4
35°	659.5	608.1	516.8	454.3	438.0
37.5°	631.5	574.8	478.4	415.1	398.2
40°	602.8	541.6	441.2	376.0	362.4
42.5°	573.5	507.7	404.7	339.5	327.2
45°	542.9	473.8	369.5	305.7	293.9
47.5°	511.6	439.3	333.7	273.7	262.6
50°	478.4	404.7	299.8	242.4	230.7
52.5°	446.4	369.5	267.2	211.8	205.9
55°	413.8	335.0	235.3	189.7	187.0
57.5°	381.3	300.4	205.9	172.1	169.4
60°	348.0	266.6	176.0	153.8	151.2
62.5°	314.8	233.3	153.8	136.2	134.9
65°	280.9	200.7	134.9	119.9	119.3
67.5°	245.0	169.4	118.0	105.6	104.9
70°	211.2	138.2	101.0	91.2	91.2
72.5°	179.2	109.5	85.4	77.6	77.6
75°	144.7	88.0	70.4	64.5	65.2
77.5°	114.1	69.1	56.7	52.8	52.8
80°	84.7	51.5	43.7	40.4	41.1
82.5°	57.4	35.8	31.3	29.3	29.3
85°	32.6	22.2	20.2	18.9	18.9
87.5°	11.7	10.4	9.8	8.5	9.1
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	18.29	19.82	18.66	20.13	20.44	14.07	15.60	14.44	15.91	16.22
	3H	20.07	21.44	20.44	21.76	22.13	15.68	17.05	16.06	17.38	17.74
	4H	20.74	22.02	21.14	22.37	22.75	16.31	17.60	16.71	17.95	18.33
	6H	21.25	22.44	21.66	22.80	23.20	16.81	18.00	17.22	18.37	18.76
	8H	21.41	22.54	21.84	22.93	23.33	16.98	18.12	17.41	18.50	18.91
	12H	21.51	22.59	21.94	22.98	23.41	17.10	18.19	17.53	18.57	19.00
4H	2H	18.39	19.67	18.79	20.02	20.40	14.79	16.07	15.19	16.42	16.80
	3H	20.33	21.40	20.74	21.80	22.20	16.60	17.67	17.01	18.07	18.47
	4H	21.09	22.05	21.52	22.47	22.91	17.33	18.30	17.76	18.71	19.15
	6H	21.72	22.56	22.18	23.00	23.46	17.95	18.79	18.41	19.23	19.69
	8H	21.94	22.73	22.41	23.17	23.64	18.16	18.95	18.63	19.39	19.86
	12H	22.10	22.80	22.58	23.28	23.75	18.33	19.03	18.81	19.51	19.98
8H	4H	21.15	21.93	21.61	22.37	22.84	17.72	18.51	18.18	18.95	19.42
	6H	21.84	22.49	22.34	22.98	23.46	18.45	19.10	18.95	19.59	20.07
	8H	22.11	22.69	22.63	23.20	23.69	18.74	19.32	19.25	19.83	20.32
	12H	22.33	22.85	22.84	23.34	23.90	18.99	19.50	19.50	19.99	20.56
12H	4H	21.14	21.84	21.62	22.32	22.79	17.78	18.48	18.26	18.96	19.43
	6H	21.84	22.42	22.35	22.93	23.42	18.54	19.12	19.05	19.63	20.12
	8H	22.15	22.66	22.66	23.15	23.72	18.88	19.40	19.39	19.89	20.46