

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: P1217358

Luminaire Tested: S124DRP-H290D850-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

Test Information

Test Method: LM-79-2024
Report Number: P1217358
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-3)
Test Lab: INNOVATION CENTER
Issue Date: 4/9/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-H290D850-X4F0-XX-UDD-G-W
Description: DEFINE 4, DIRECT RECESSED WITH GRAZE FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

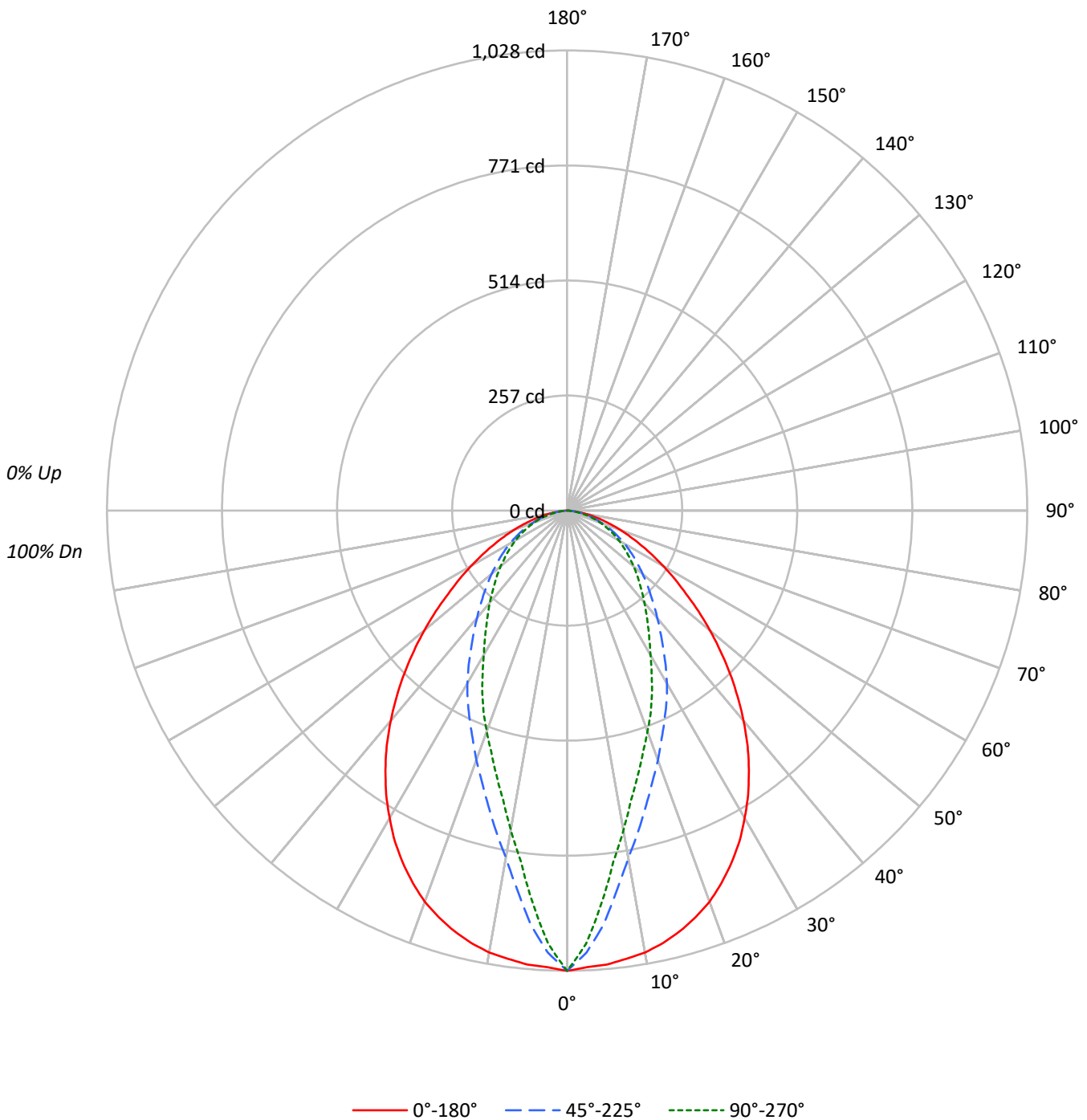
Lumens per Lamp: N/A
Luminaire Lumens: 1441.8 lumens
Efficiency: N/A
Efficacy: 123.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.59 / 0.87
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
Input Voltage (V): 120
Input Current (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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	110	106	102	99	108	104	100	97	100	97	94	96	94	92	92	90	89	87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	79	83	80	77	75
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65
4	87	76	68	62	84	75	67	62	72	66	61	70	64	60	68	63	59	57
5	80	69	61	55	78	68	60	54	66	59	54	64	58	53	62	57	53	51
6	75	63	55	49	73	62	54	49	60	53	48	58	52	48	57	52	47	45
7	70	58	50	44	68	57	49	44	55	48	43	54	48	43	53	47	43	41
8	66	53	45	40	64	52	45	40	51	44	40	50	44	39	49	43	39	37
9	62	49	42	36	60	49	41	36	48	41	36	47	40	36	46	40	36	34
10	58	46	38	34	57	45	38	34	44	38	33	43	37	33	43	37	33	31

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9090	9090	9090
5°	9036	8244	7815
10°	8998	7067	6503
15°	8905	6236	5594
20°	8748	5579	4941
25°	8471	5021	4376
30°	8097	4552	3799
35°	7637	4036	3401
40°	7075	3616	3099
45°	6431	3288	2858
50°	5729	3026	2671
55°	4996	2812	2499
60°	4387	2617	2354
65°	3797	2414	2197
70°	3288	2190	2024
75°	2736	1933	1780
80°	2118	1568	1451
85°	1329	1055	964

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6431 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.1	6.0
10°-20°	204.4	14.2
20°-30°	261.2	18.1
30°-40°	265.3	18.4
40°-50°	235.2	16.3
50°-60°	184.8	12.8
60°-70°	125.9	8.7
70°-80°	64.6	4.5
80°-90°	14.3	1.0
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°	551.7	38.3
0°-40°	817.0	56.7
0°-60°	1237.1	85.8
0°-90°	1441.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1441.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1028	1028	1028	1028	1028	
5°	1018	992	929	893	880	97
15°	973	812	681	625	611	274
25°	868	636	515	465	449	399
35°	708	482	374	326	315	442
45°	514	347	263	236	229	396
55°	324	231	182	166	162	293
65°	182	140	115	107	105	182
75°	80	66	57	54	52	86
85°	13	12	10	10	10	18
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1028.1	1028.1	1028.1	1028.1	1028.1
2.5°	1020.8	1022.2	988.2	976.0	968.8
5°	1018.1	992.3	928.9	893.2	880.5
7.5°	1010.0	953.8	853.8	804.5	791.3
10°	1002.3	909.9	787.2	738.4	724.3
12.5°	989.6	861.5	733.8	677.7	660.9
15°	972.9	812.1	681.3	625.2	611.1
17.5°	952.9	765.1	633.8	579.9	564.5
20°	929.8	721.6	593.0	537.8	525.1
22.5°	900.9	678.6	551.4	501.6	487.6
25°	868.3	636.5	514.7	465.4	448.6
27.5°	833.4	595.8	480.8	426.0	408.3
30°	793.1	556.8	445.9	388.4	372.1
32.5°	752.4	518.3	409.2	354.9	341.8
35°	707.6	482.1	373.9	326.4	315.1
37.5°	662.3	447.3	342.2	300.6	290.6
40°	613.0	413.3	313.3	276.6	268.5
42.5°	563.6	379.4	287.0	255.3	247.6
45°	514.3	347.2	263.0	235.9	228.6
47.5°	464.5	315.5	240.8	216.8	211.0
50°	416.5	285.7	220.0	199.2	194.2
52.5°	369.9	257.6	200.1	182.4	177.0
55°	324.1	231.3	182.4	166.1	162.1
57.5°	285.2	206.9	164.8	150.7	147.6
60°	248.1	183.3	148.0	136.3	133.1
62.5°	213.2	161.6	131.3	121.8	119.5
65°	181.5	140.3	115.4	107.3	105.0
67.5°	152.6	120.9	99.1	93.3	91.4
70°	127.2	101.4	84.7	79.7	78.3
72.5°	101.9	82.8	70.2	66.5	65.2
75°	80.1	66.1	56.6	53.9	52.1
77.5°	60.2	50.2	43.5	41.2	39.8
80°	41.6	35.8	30.8	29.9	28.5
82.5°	26.3	22.6	19.9	19.5	18.1
85°	13.1	12.2	10.4	10.4	9.5
87.5°	4.5	4.1	4.1	4.1	3.6
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	16.57	18.06	16.94	18.37	18.69	13.90	15.38	14.26	15.70	16.01
	3H	18.17	19.50	18.54	19.83	20.19	15.50	16.83	15.87	17.16	17.52
	4H	18.70	19.95	19.10	20.29	20.67	16.05	17.30	16.45	17.65	18.03
	6H	19.03	20.18	19.44	20.55	20.94	16.41	17.56	16.82	17.93	18.32
	8H	19.10	20.20	19.53	20.59	20.99	16.50	17.59	16.92	17.98	18.39
	12H	19.13	20.18	19.56	20.57	21.00	16.53	17.58	16.96	17.97	18.39
4H	2H	16.80	18.05	17.20	18.40	18.78	14.57	15.82	14.97	16.17	16.55
	3H	18.59	19.62	19.00	20.02	20.42	16.36	17.40	16.77	17.80	18.20
	4H	19.23	20.16	19.66	20.57	21.01	17.02	17.96	17.46	18.37	18.81
	6H	19.67	20.48	20.13	20.92	21.39	17.48	18.29	17.94	18.73	19.20
	8H	19.78	20.54	20.25	20.98	21.45	17.60	18.35	18.06	18.80	19.27
	12H	19.84	20.52	20.32	20.99	21.47	17.66	18.33	18.14	18.81	19.28
8H	4H	19.33	20.09	19.79	20.53	21.00	17.32	18.08	17.79	18.53	18.99
	6H	19.85	20.47	20.34	20.96	21.44	17.87	18.50	18.37	18.99	19.47
	8H	20.00	20.56	20.52	21.07	21.56	18.04	18.60	18.56	19.11	19.60
	12H	20.10	20.60	20.61	21.09	21.65	18.15	18.64	18.66	19.13	19.70
12H	4H	19.32	20.00	19.80	20.47	20.95	17.35	18.02	17.83	18.50	18.97
	6H	19.84	20.40	20.36	20.91	21.40	17.91	18.47	18.43	18.98	19.47
	8H	20.03	20.53	20.54	21.02	21.58	18.12	18.62	18.64	19.11	19.68