

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: P1217403

Luminaire Tested: S124DRP-S290D850-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

Test Information

Test Method: LM-79-2024
Report Number: P1217403
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-S290D850-X4F0-XX-UDD-G-W
Description: DEFINE 4, DIRECT RECESSED WITH GRAZE FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

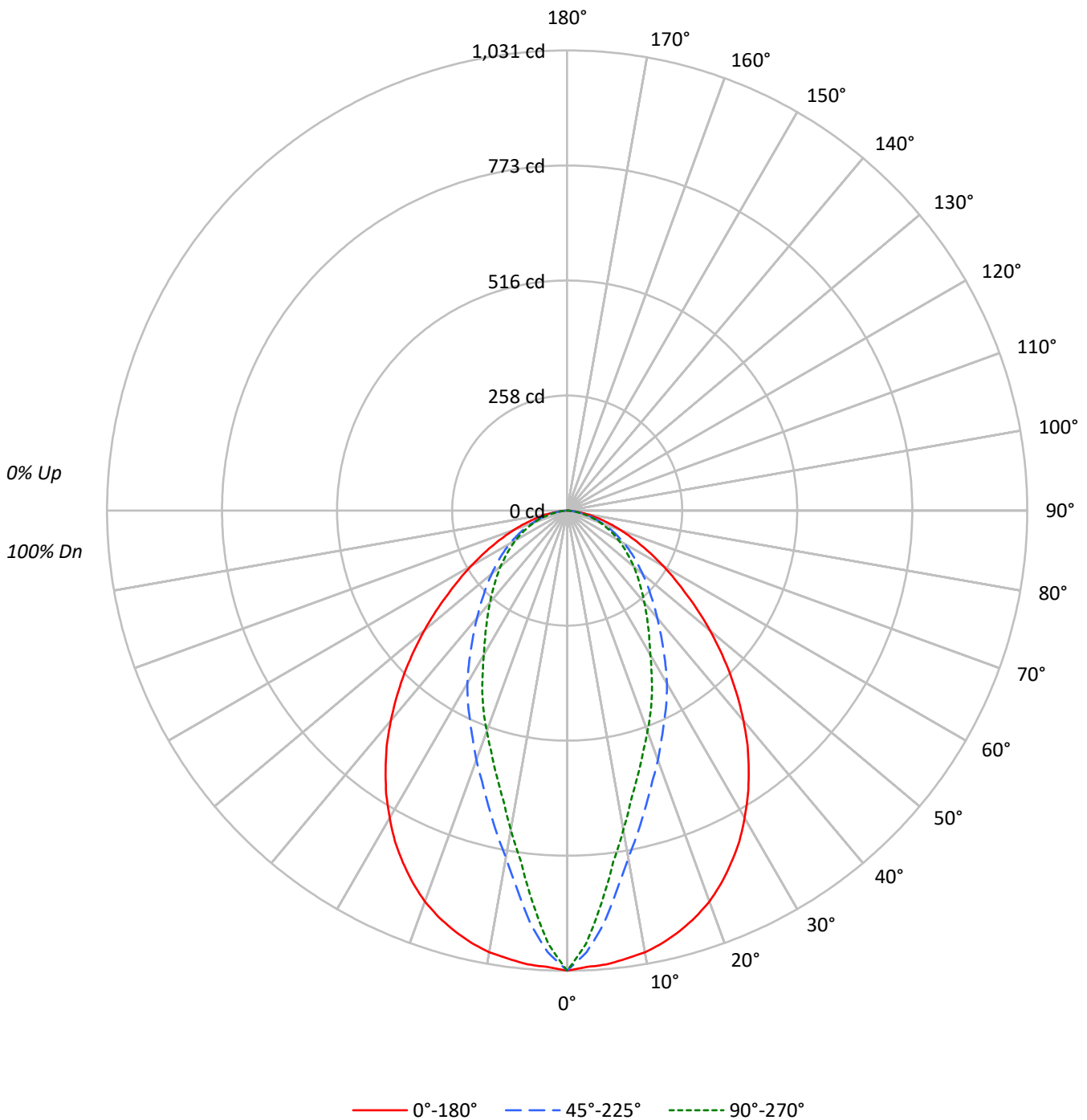
Lumens per Lamp: N/A
Luminaire Lumens: 1445.4 lumens
Efficiency: N/A
Efficacy: 114.7 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.59 / 0.87
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9112	9112	9112
5°	9058	8265	7834
10°	9020	7085	6519
15°	8926	6252	5607
20°	8770	5594	4953
25°	8491	5034	4387
30°	8117	4563	3808
35°	7656	4046	3410
40°	7092	3624	3106
45°	6446	3297	2866
50°	5743	3034	2678
55°	5008	2819	2505
60°	4398	2624	2359
65°	3808	2420	2203
70°	3296	2195	2029
75°	2743	1937	1783
80°	2128	1573	1456
85°	1339	1055	964

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6446 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.3	6.0
10°-20°	204.9	14.2
20°-30°	261.9	18.1
30°-40°	266.0	18.4
40°-50°	235.8	16.3
50°-60°	185.3	12.8
60°-70°	126.2	8.7
70°-80°	64.8	4.5
80°-90°	14.4	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°	553.1	38.3
0°-40°	819.1	56.7
0°-60°	1240.1	85.8
0°-90°	1445.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1445.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1031	1031	1031	1031	1031	
5°	1021	995	931	895	883	97
15°	975	814	683	627	613	275
25°	870	638	516	466	450	400
35°	709	483	375	327	316	443
45°	516	348	264	236	229	397
55°	325	232	183	166	162	293
65°	182	141	116	108	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°	1030.6	1030.6	1030.6	1030.6	1030.6
2.5°	1023.4	1024.7	990.7	978.4	971.2
5°	1020.6	994.8	931.2	895.4	882.7
7.5°	1012.5	956.2	855.9	806.4	793.3
10°	1004.7	912.2	789.2	740.2	726.1
12.5°	992.0	863.6	735.6	679.4	662.6
15°	975.2	814.1	683.0	626.7	612.6
17.5°	955.3	766.9	635.3	581.3	565.9
20°	932.1	723.4	594.5	539.1	526.4
22.5°	903.1	680.3	552.7	502.8	488.8
25°	870.4	638.1	516.0	466.5	449.7
27.5°	835.5	597.2	482.0	427.0	409.3
30°	795.1	558.2	447.0	389.4	373.0
32.5°	754.2	519.6	410.2	355.8	342.6
35°	709.3	483.3	374.9	327.2	315.9
37.5°	663.9	448.4	343.1	301.3	291.3
40°	614.5	414.3	314.0	277.3	269.1
42.5°	565.0	380.3	287.7	256.0	248.2
45°	515.5	348.1	263.7	236.4	229.2
47.5°	465.6	316.3	241.4	217.4	211.5
50°	417.5	286.4	220.6	199.7	194.7
52.5°	370.8	258.2	200.6	182.9	177.4
55°	324.9	231.9	182.9	166.5	162.5
57.5°	285.9	207.4	165.2	151.1	147.9
60°	248.7	183.8	148.4	136.6	133.4
62.5°	213.7	162.0	131.6	122.1	119.8
65°	182.0	140.7	115.7	107.6	105.3
67.5°	152.9	121.2	99.4	93.5	91.7
70°	127.5	101.7	84.9	79.9	78.5
72.5°	102.1	83.0	70.3	66.7	65.3
75°	80.3	66.3	56.7	54.0	52.2
77.5°	60.4	50.4	43.6	41.3	39.9
80°	41.8	35.9	30.9	30.0	28.6
82.5°	26.3	22.7	20.0	19.5	18.2
85°	13.2	12.3	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	16.58	18.07	16.95	18.38	18.70	13.91	15.39	14.27	15.71	16.02
	3H	18.17	19.51	18.55	19.84	20.20	15.50	16.84	15.88	17.17	17.53
	4H	18.70	19.95	19.10	20.30	20.68	16.06	17.31	16.46	17.66	18.04
	6H	19.04	20.19	19.45	20.56	20.95	16.42	17.57	16.83	17.94	18.33
	8H	19.11	20.21	19.54	20.60	21.00	16.51	17.60	16.93	17.99	18.39
	12H	19.14	20.19	19.57	20.58	21.01	16.54	17.59	16.97	17.97	18.40
4H	2H	16.81	18.06	17.21	18.41	18.79	14.58	15.83	14.98	16.18	16.56
	3H	18.59	19.63	19.00	20.03	20.43	16.37	17.41	16.78	17.81	18.21
	4H	19.23	20.17	19.67	20.58	21.02	17.03	17.97	17.47	18.38	18.82
	6H	19.68	20.49	20.14	20.93	21.39	17.49	18.30	17.95	18.74	19.20
	8H	19.79	20.55	20.26	20.99	21.46	17.61	18.36	18.07	18.81	19.28
	12H	19.85	20.53	20.33	21.00	21.48	17.67	18.34	18.15	18.82	19.29
8H	4H	19.34	20.09	19.80	20.54	21.01	17.33	18.09	17.80	18.53	19.00
	6H	19.86	20.48	20.35	20.97	21.45	17.88	18.51	18.38	19.00	19.48
	8H	20.01	20.57	20.53	21.08	21.57	18.05	18.61	18.57	19.12	19.61
	12H	20.11	20.61	20.62	21.10	21.66	18.16	18.65	18.67	19.14	19.71
12H	4H	19.33	20.00	19.81	20.48	20.95	17.36	18.03	17.84	18.51	18.98
	6H	19.85	20.41	20.37	20.92	21.41	17.92	18.48	18.44	18.99	19.48
	8H	20.04	20.54	20.55	21.03	21.59	18.13	18.63	18.64	19.12	19.68