

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: P1217357

Luminaire Tested: S124DRP-H290D840-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

Test Information

Test Method: LM-79-2024
Report Number: P1217357
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-H290D840-X4F0-XX-UDD-G-W
Description: DEFINE 4, DIRECT RECESSED WITH GRAZE FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

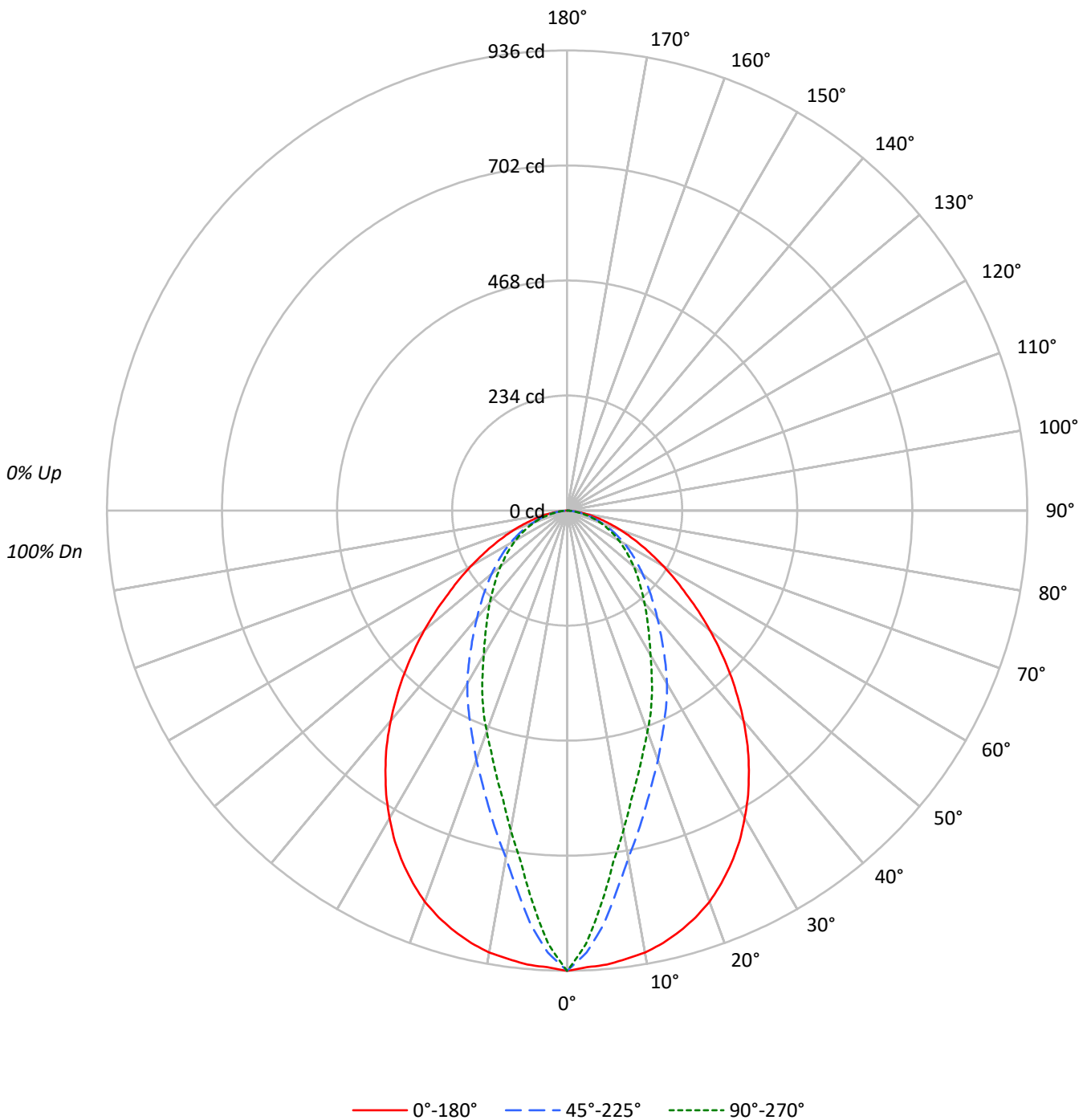
Lumens per Lamp: N/A
Luminaire Lumens: 1313.0 lumens
Efficiency: N/A
Efficacy: 112.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.59 / 0.87
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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°	8277	8277	8277
5°	8228	7507	7116
10°	8194	6436	5922
15°	8109	5679	5094
20°	7966	5081	4499
25°	7714	4572	3985
30°	7373	4146	3460
35°	6954	3675	3097
40°	6443	3293	2822
45°	5855	2995	2603
50°	5217	2755	2432
55°	4550	2560	2275
60°	3995	2384	2143
65°	3458	2199	2000
70°	2993	1993	1843
75°	2494	1759	1619
80°	1930	1426	1324
85°	1217	964	883

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5855 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.4	6.0
10°-20°	186.2	14.2
20°-30°	237.9	18.1
30°-40°	241.6	18.4
40°-50°	214.2	16.3
50°-60°	168.3	12.8
60°-70°	114.6	8.7
70°-80°	58.8	4.5
80°-90°	13.0	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°	502.4	38.3
0°-40°	744.0	56.7
0°-60°	1126.5	85.8
0°-90°	1313.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1313.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	936	936	936	936	936	
5°	927	904	846	813	802	88
15°	886	740	620	569	556	250
25°	791	580	469	424	408	363
35°	644	439	340	297	287	402
45°	468	316	240	215	208	361
55°	295	211	166	151	148	267
65°	165	128	105	98	96	165
75°	73	60	52	49	47	78
85°	12	11	10	10	9	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	936.2	936.2	936.2	936.2	936.2
2.5°	929.6	930.8	899.9	888.8	882.2
5°	927.1	903.6	845.9	813.3	801.8
7.5°	919.7	868.6	777.5	732.5	720.6
10°	912.7	828.6	716.9	672.4	659.6
12.5°	901.1	784.5	668.2	617.1	601.9
15°	885.9	739.5	620.4	569.3	556.5
17.5°	867.8	696.7	577.1	528.1	514.1
20°	846.7	657.1	540.0	489.7	478.2
22.5°	820.3	617.9	502.1	456.8	444.0
25°	790.7	579.6	468.7	423.8	408.5
27.5°	758.9	542.5	437.8	387.9	371.8
30°	722.2	507.0	406.1	353.7	338.9
32.5°	685.1	472.0	372.7	323.2	311.2
35°	644.3	439.0	340.5	297.2	286.9
37.5°	603.1	407.3	311.6	273.7	264.7
40°	558.2	376.4	285.3	251.9	244.5
42.5°	513.2	345.5	261.4	232.5	225.5
45°	468.3	316.2	239.5	214.8	208.2
47.5°	423.0	287.3	219.3	197.5	192.1
50°	379.3	260.1	200.3	181.4	176.8
52.5°	336.8	234.6	182.2	166.1	161.2
55°	295.2	210.7	166.1	151.3	147.6
57.5°	259.7	188.4	150.1	137.3	134.4
60°	225.9	167.0	134.8	124.1	121.2
62.5°	194.2	147.2	119.5	110.9	108.8
65°	165.3	127.8	105.1	97.7	95.6
67.5°	138.9	110.1	90.3	84.9	83.3
70°	115.8	92.3	77.1	72.6	71.3
72.5°	92.8	75.4	63.9	60.6	59.4
75°	73.0	60.2	51.5	49.1	47.4
77.5°	54.8	45.8	39.6	37.5	36.3
80°	37.9	32.6	28.0	27.2	26.0
82.5°	23.9	20.6	18.1	17.7	16.5
85°	12.0	11.1	9.5	9.5	8.7
87.5°	4.1	3.7	3.7	3.7	3.3
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	16.25	17.73	16.61	18.05	18.36	13.57	15.06	13.94	15.37	15.69
	3H	17.84	19.17	18.22	19.50	19.86	15.17	16.51	15.55	16.83	17.20
	4H	18.37	19.62	18.77	19.97	20.35	15.73	16.98	16.13	17.33	17.71
	6H	18.70	19.86	19.11	20.22	20.61	16.09	17.24	16.50	17.61	18.00
	8H	18.78	19.88	19.21	20.27	20.67	16.17	17.27	16.60	17.66	18.06
	12H	18.81	19.86	19.24	20.24	20.67	16.21	17.26	16.64	17.64	18.07
4H	2H	16.48	17.73	16.88	18.08	18.45	14.25	15.50	14.65	15.85	16.23
	3H	18.26	19.30	18.67	19.70	20.10	16.04	17.07	16.45	17.47	17.88
	4H	18.90	19.83	19.33	20.25	20.69	16.70	17.63	17.13	18.05	18.49
	6H	19.35	20.16	19.80	20.60	21.06	17.16	17.97	17.62	18.41	18.87
	8H	19.46	20.21	19.92	20.66	21.13	17.27	18.03	17.74	18.47	18.94
	12H	19.52	20.19	20.00	20.67	21.14	17.33	18.01	17.82	18.49	18.96
8H	4H	19.00	19.76	19.47	20.20	20.67	17.00	17.76	17.46	18.20	18.67
	6H	19.52	20.15	20.02	20.64	21.12	17.55	18.17	18.05	18.66	19.14
	8H	19.68	20.24	20.19	20.75	21.24	17.72	18.28	18.23	18.79	19.27
	12H	19.78	20.27	20.29	20.76	21.33	17.82	18.32	18.34	18.81	19.38
12H	4H	18.99	19.67	19.48	20.15	20.62	17.02	17.70	17.51	18.18	18.65
	6H	19.52	20.07	20.03	20.59	21.07	17.59	18.15	18.10	18.66	19.15
	8H	19.71	20.20	20.22	20.69	21.26	17.80	18.29	18.31	18.78	19.35