

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: P1217382

Luminaire Tested: S124DRP-H865D830-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

Test Information

Test Method: LM-79-2024
Report Number: P1217382
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-H865D830-X4F0-XX-UDD-G-W
Description: DEFINE 4, DIRECT RECESSED WITH GRAZE FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

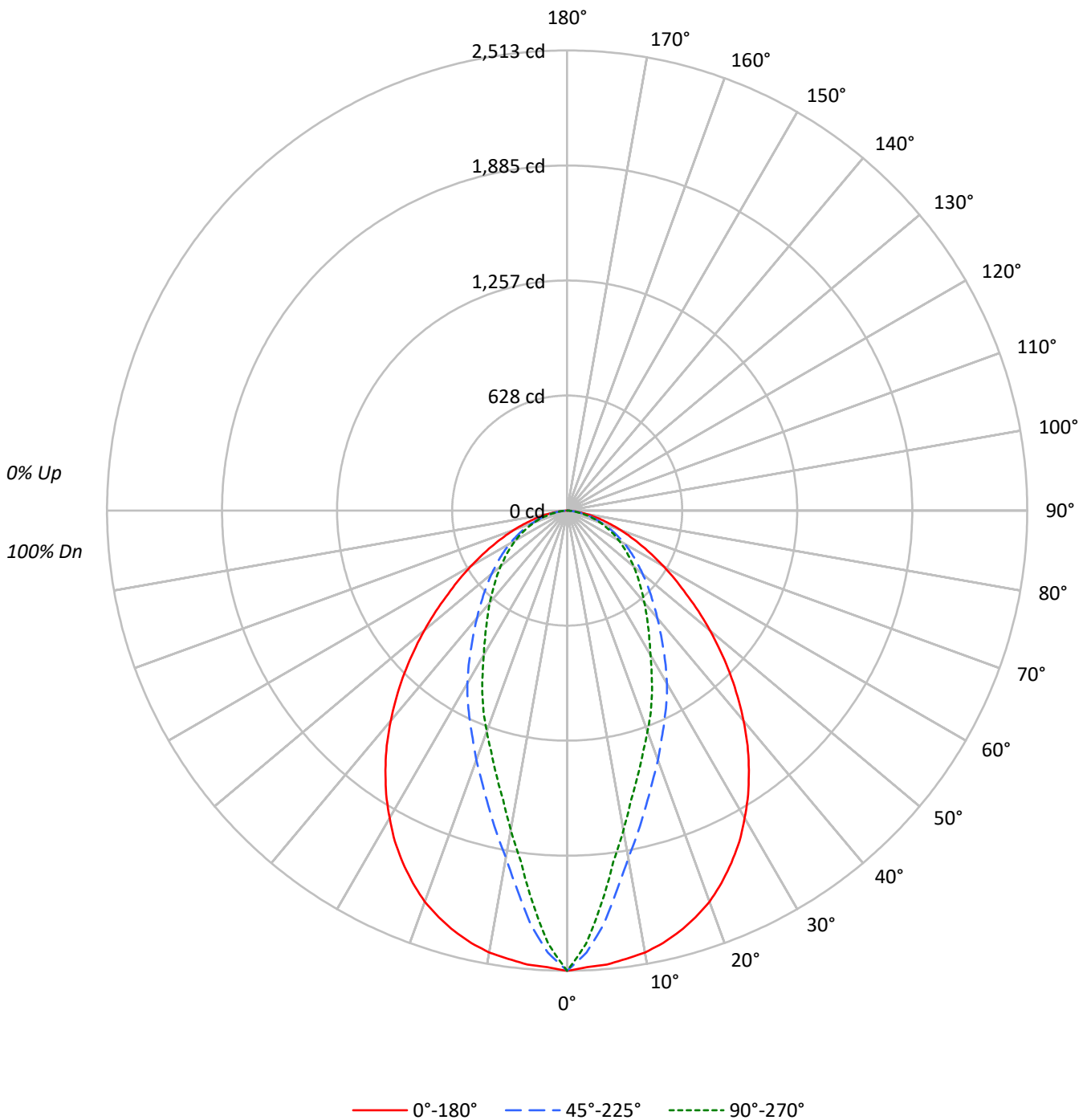
Lumens per Lamp: N/A
Luminaire Lumens: 3524.7 lumens
Efficiency: N/A
Efficacy: 114.1 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.59 / 0.87
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 30.9
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°	22220	22220	22220
5°	22088	20154	19103
10°	21996	17278	15896
15°	21768	15245	13675
20°	21386	13640	12078
25°	20706	12275	10699
30°	19793	11128	9287
35°	18669	9866	8313
40°	17294	8839	7574
45°	15718	8040	6988
50°	14004	7397	6531
55°	12214	6875	6107
60°	10723	6399	5754
65°	9285	5904	5370
70°	8039	5348	4948
75°	6692	4724	4349
80°	5183	3834	3549
85°	3256	2587	2353

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15718 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	210.4	6.0
10°-20°	499.7	14.2
20°-30°	638.6	18.1
30°-40°	648.6	18.4
40°-50°	575.0	16.3
50°-60°	451.8	12.8
60°-70°	307.7	8.7
70°-80°	157.9	4.5
80°-90°	35.0	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°	1348.7	38.3
0°-40°	1997.3	56.7
0°-60°	3024.1	85.8
0°-90°	3524.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3524.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2513	2513	2513	2513	2513	
5°	2489	2426	2271	2183	2152	236
15°	2378	1985	1666	1528	1494	670
25°	2122	1556	1258	1138	1097	975
35°	1730	1179	914	798	770	1079
45°	1257	849	643	577	559	968
55°	792	566	446	406	396	716
65°	444	343	282	262	257	444
75°	196	162	138	132	127	210
85°	32	30	26	26	23	43
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2513.2	2513.2	2513.2	2513.2	2513.2
2.5°	2495.5	2498.8	2415.8	2385.9	2368.2
5°	2488.8	2425.8	2270.8	2183.4	2152.4
7.5°	2468.9	2331.7	2087.1	1966.5	1934.4
10°	2450.1	2224.4	1924.5	1804.9	1770.6
12.5°	2419.1	2105.9	1793.9	1656.6	1615.7
15°	2378.2	1985.3	1665.5	1528.3	1494.0
17.5°	2329.5	1870.2	1549.3	1417.6	1380.0
20°	2273.0	1764.0	1449.7	1314.7	1283.7
22.5°	2202.2	1658.9	1347.9	1226.2	1191.9
25°	2122.5	1555.9	1258.3	1137.6	1096.7
27.5°	2037.3	1456.3	1175.3	1041.4	998.2
30°	1938.8	1361.2	1090.0	949.5	909.7
32.5°	1839.2	1267.1	1000.4	867.6	835.5
35°	1729.7	1178.6	914.1	797.9	770.2
37.5°	1619.0	1093.4	836.6	734.8	710.5
40°	1498.4	1010.4	765.8	676.2	656.2
42.5°	1377.8	927.4	701.6	624.1	605.3
45°	1257.1	848.8	643.0	576.6	558.9
47.5°	1135.4	771.3	588.7	530.1	515.7
50°	1018.1	698.3	537.8	486.9	474.8
52.5°	904.1	629.7	489.1	446.0	432.7
55°	792.4	565.5	446.0	406.1	396.2
57.5°	697.2	505.7	402.8	368.5	360.8
60°	606.4	448.2	361.9	333.1	325.4
62.5°	521.2	395.1	320.9	297.7	292.2
65°	443.8	343.1	282.2	262.3	256.7
67.5°	372.9	295.5	242.4	228.0	223.5
70°	311.0	247.9	206.9	194.8	191.4
72.5°	249.0	202.5	171.5	162.7	159.4
75°	195.9	161.6	138.3	131.7	127.3
77.5°	147.2	122.8	106.2	100.7	97.4
80°	101.8	87.4	75.3	73.0	69.7
82.5°	64.2	55.3	48.7	47.6	44.3
85°	32.1	29.9	25.5	25.5	23.2
87.5°	11.1	10.0	10.0	10.0	8.9
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	19.68	21.17	20.04	21.48	21.79	17.00	18.49	17.37	18.80	19.12
	3H	21.27	22.60	21.65	22.93	23.29	18.60	19.94	18.98	20.26	20.63
	4H	21.80	23.05	22.20	23.40	23.78	19.16	20.41	19.56	20.76	21.14
	6H	22.13	23.29	22.55	23.65	24.05	19.52	20.67	19.93	21.04	21.43
	8H	22.21	23.31	22.64	23.70	24.10	19.60	20.70	20.03	21.09	21.49
	12H	22.24	23.29	22.67	23.67	24.10	19.64	20.69	20.07	21.07	21.50
4H	2H	19.91	21.16	20.31	21.51	21.88	17.68	18.93	18.08	19.28	19.66
	3H	21.69	22.73	22.10	23.13	23.53	19.47	20.50	19.88	20.90	21.31
	4H	22.33	23.26	22.76	23.68	24.12	20.13	21.06	20.56	21.48	21.92
	6H	22.78	23.59	23.23	24.03	24.49	20.59	21.40	21.05	21.84	22.30
	8H	22.89	23.65	23.35	24.09	24.56	20.70	21.46	21.17	21.90	22.37
	12H	22.95	23.62	23.43	24.10	24.57	20.76	21.44	21.25	21.92	22.39
8H	4H	22.43	23.19	22.90	23.64	24.10	20.43	21.19	20.89	21.63	22.10
	6H	22.95	23.58	23.45	24.07	24.55	20.98	21.60	21.48	22.09	22.57
	8H	23.11	23.67	23.62	24.18	24.67	21.15	21.71	21.66	22.22	22.70
	12H	23.21	23.70	23.72	24.19	24.76	21.25	21.75	21.77	22.24	22.81
12H	4H	22.43	23.10	22.91	23.58	24.05	20.45	21.13	20.94	21.61	22.08
	6H	22.95	23.51	23.46	24.02	24.50	21.02	21.58	21.53	22.09	22.58
	8H	23.14	23.63	23.65	24.12	24.69	21.23	21.72	21.74	22.22	22.78