

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: P1217384

Luminaire Tested: S124DRP-H865D840-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

Test Information

Test Method: LM-79-2024
Report Number: P1217384
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-H865D840-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

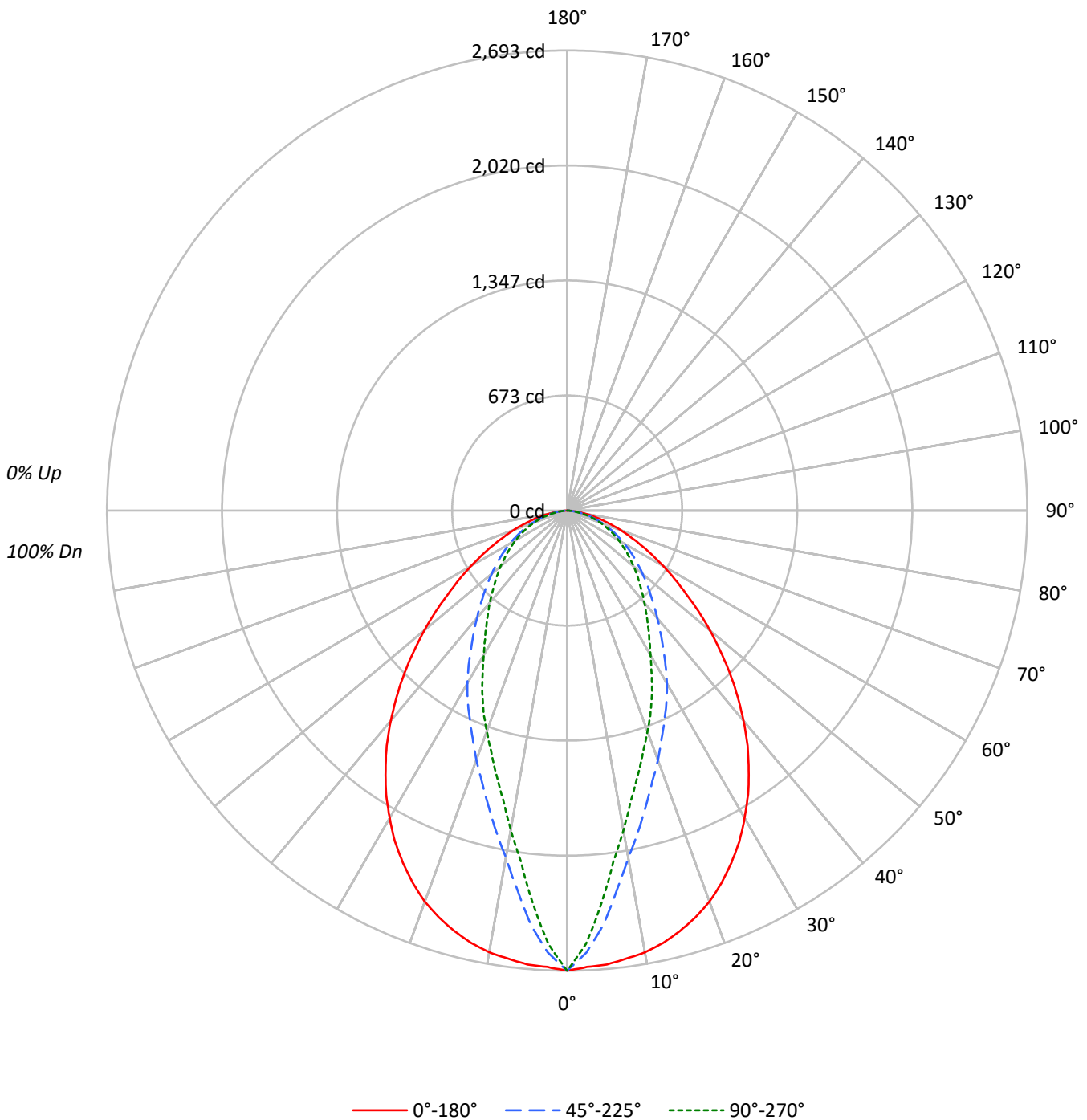
Lumens per Lamp: N/A
Luminaire Lumens: 3776.5 lumens
Efficiency: N/A
Efficacy: 122.2 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.59 / 0.87
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 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°	23807	23807	23807
5°	23666	21593	20468
10°	23568	18511	17032
15°	23323	16334	14652
20°	22914	14615	12941
25°	22186	13151	11463
30°	21207	11923	9950
35°	20002	10571	8907
40°	18529	9470	8115
45°	16841	8614	7487
50°	15004	7925	6997
55°	13087	7365	6543
60°	11490	6856	6164
65°	9948	6326	5755
70°	8613	5731	5302
75°	7170	5063	4659
80°	5555	4104	3803
85°	3490	2769	2526

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16841 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	225.4	6.0
10°-20°	535.4	14.2
20°-30°	684.2	18.1
30°-40°	694.9	18.4
40°-50°	616.0	16.3
50°-60°	484.1	12.8
60°-70°	329.6	8.7
70°-80°	169.2	4.5
80°-90°	37.5	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°	1445.1	38.3
0°-40°	2140.0	56.7
0°-60°	3240.1	85.8
0°-90°	3776.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3776.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2693	2693	2693	2693	2693	
5°	2667	2599	2433	2339	2306	253
15°	2548	2127	1784	1637	1601	718
25°	2274	1667	1348	1219	1175	1045
35°	1853	1263	979	855	825	1156
45°	1347	909	689	618	599	1038
55°	849	606	478	435	424	767
65°	476	368	302	281	275	476
75°	210	173	148	141	136	225
85°	34	32	27	27	25	46
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2692.7	2692.7	2692.7	2692.7	2692.7
2.5°	2673.7	2677.3	2588.4	2556.3	2537.4
5°	2666.6	2599.0	2433.0	2339.4	2306.2
7.5°	2645.3	2498.2	2236.2	2107.0	2072.6
10°	2625.1	2383.2	2061.9	1933.9	1897.1
12.5°	2591.9	2256.4	1922.0	1775.0	1731.1
15°	2548.0	2127.1	1784.5	1637.4	1600.7
17.5°	2495.9	2003.8	1660.0	1518.9	1478.6
20°	2435.4	1890.0	1553.3	1408.6	1375.4
22.5°	2359.5	1777.3	1444.2	1313.7	1277.0
25°	2274.2	1667.1	1348.1	1218.9	1175.0
27.5°	2182.9	1560.4	1259.2	1115.7	1069.5
30°	2077.3	1458.4	1167.9	1017.3	974.6
32.5°	1970.6	1357.6	1071.9	929.6	895.2
35°	1853.2	1262.8	979.4	854.9	825.2
37.5°	1734.7	1171.5	896.4	787.3	761.2
40°	1605.4	1082.5	820.5	724.5	703.1
42.5°	1476.2	993.6	751.7	668.7	648.6
45°	1346.9	909.4	688.9	617.7	598.8
47.5°	1216.5	826.4	630.8	567.9	552.5
50°	1090.8	748.2	576.2	521.7	508.7
52.5°	968.7	674.7	524.1	477.8	463.6
55°	849.0	605.9	477.8	435.1	424.5
57.5°	747.0	541.9	431.6	394.8	386.5
60°	649.8	480.2	387.7	356.9	348.6
62.5°	558.5	423.3	343.9	319.0	313.0
65°	475.5	367.6	302.4	281.0	275.1
67.5°	399.6	316.6	259.7	244.3	239.5
70°	333.2	265.6	221.7	208.7	205.1
72.5°	266.8	217.0	183.8	174.3	170.7
75°	209.9	173.1	148.2	141.1	136.4
77.5°	157.7	131.6	113.8	107.9	104.3
80°	109.1	93.7	80.6	78.3	74.7
82.5°	68.8	59.3	52.2	51.0	47.4
85°	34.4	32.0	27.3	27.3	24.9
87.5°	11.9	10.7	10.7	10.7	9.5
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	19.92	21.41	20.28	21.72	22.03	17.24	18.73	17.61	19.04	19.36
	3H	21.51	22.84	21.89	23.17	23.53	18.84	20.17	19.22	20.50	20.87
	4H	22.04	23.29	22.44	23.64	24.02	19.40	20.65	19.80	21.00	21.38
	6H	22.37	23.53	22.79	23.89	24.29	19.76	20.91	20.17	21.28	21.67
	8H	22.45	23.55	22.88	23.94	24.34	19.84	20.94	20.27	21.33	21.73
	12H	22.48	23.53	22.91	23.91	24.34	19.88	20.93	20.31	21.31	21.74
4H	2H	20.15	21.40	20.55	21.75	22.13	17.92	19.17	18.32	19.52	19.90
	3H	21.93	22.97	22.34	23.37	23.77	19.71	20.74	20.12	21.14	21.55
	4H	22.57	23.50	23.00	23.92	24.36	20.37	21.30	20.80	21.72	22.16
	6H	23.02	23.83	23.48	24.27	24.73	20.83	21.64	21.28	22.08	22.54
	8H	23.13	23.89	23.59	24.33	24.80	20.94	21.70	21.41	22.14	22.61
	12H	23.19	23.86	23.67	24.34	24.81	21.00	21.68	21.49	22.16	22.63
8H	4H	22.67	23.43	23.14	23.88	24.34	20.67	21.43	21.13	21.87	22.34
	6H	23.19	23.82	23.69	24.31	24.79	21.22	21.84	21.72	22.33	22.81
	8H	23.35	23.91	23.86	24.42	24.91	21.39	21.95	21.90	22.46	22.94
	12H	23.45	23.94	23.96	24.43	25.00	21.49	21.99	22.00	22.48	23.05
12H	4H	22.67	23.34	23.15	23.82	24.29	20.69	21.37	21.18	21.85	22.32
	6H	23.19	23.75	23.70	24.26	24.74	21.26	21.82	21.77	22.33	22.82
	8H	23.38	23.87	23.89	24.36	24.93	21.47	21.96	21.98	22.45	23.02