

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: P1217383

Luminaire Tested: S124DRP-H865D835-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

Test Information

Test Method: LM-79-2024
Report Number: P1217383
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-H865D835-X4F0-XX-UDD-G-W
Description: DEFINE 4, DIRECT RECESSED WITH GRAZE FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

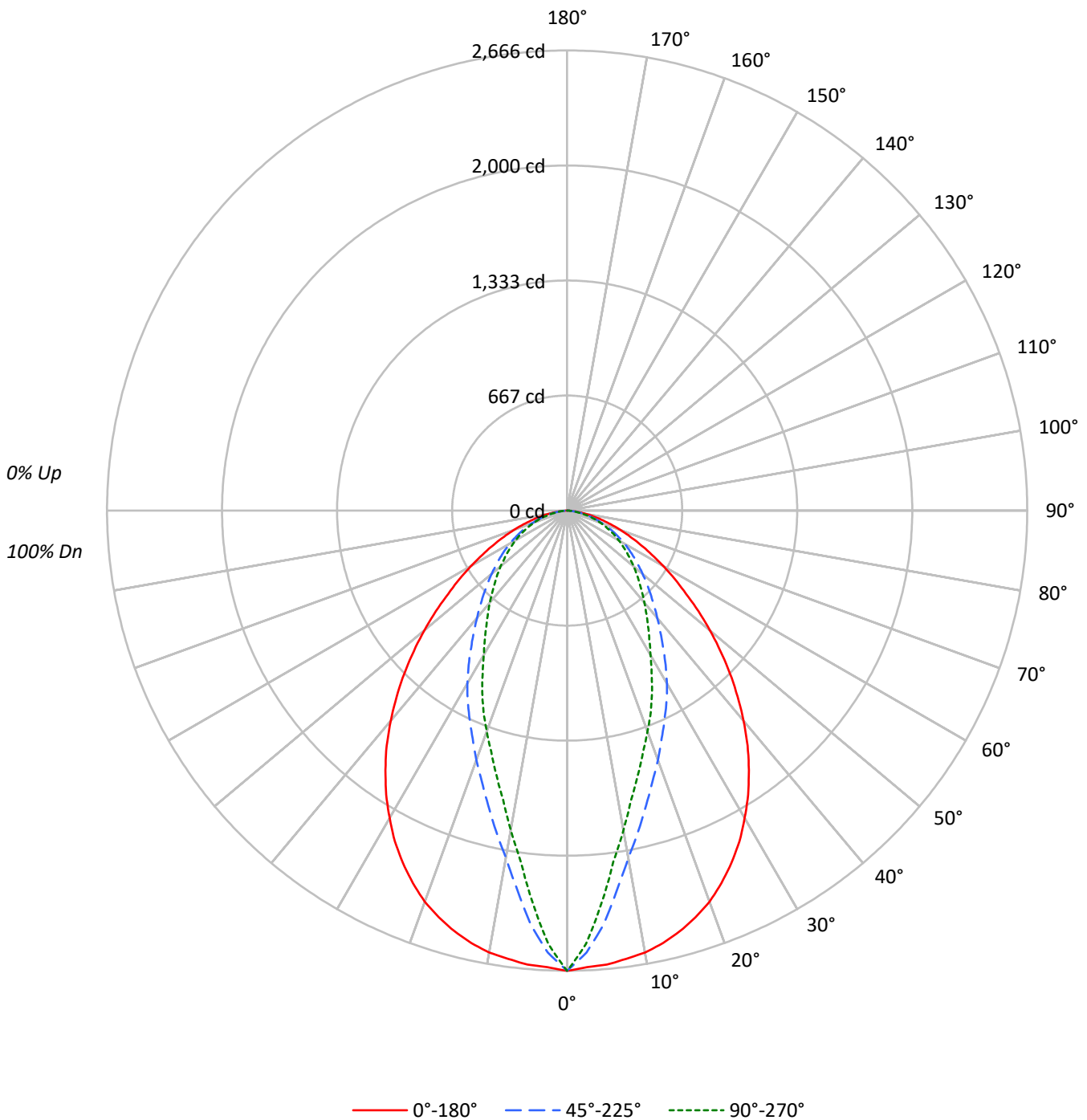
Lumens per Lamp: N/A
Luminaire Lumens: 3739.6 lumens
Efficiency: N/A
Efficacy: 121.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.59 / 0.87
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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°	23575	23575	23575
5°	23436	21383	20267
10°	23338	18331	16866
15°	23096	16174	14508
20°	22690	14472	12815
25°	21968	13023	11350
30°	21000	11807	9853
35°	19807	10467	8820
40°	18348	9378	8035
45°	16677	8530	7413
50°	14858	7848	6928
55°	12959	7294	6479
60°	11377	6788	6104
65°	9849	6264	5699
70°	8528	5677	5250
75°	7099	5015	4612
80°	5499	4063	3768
85°	3449	2739	2506

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16677 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	223.2	6.0
10°-20°	530.2	14.2
20°-30°	677.5	18.1
30°-40°	688.1	18.4
40°-50°	610.0	16.3
50°-60°	479.4	12.8
60°-70°	326.4	8.7
70°-80°	167.6	4.5
80°-90°	37.1	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°	1430.9	38.3
0°-40°	2119.1	56.7
0°-60°	3208.4	85.8
0°-90°	3739.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3739.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2666	2666	2666	2666	2666	
5°	2641	2574	2409	2316	2284	251
15°	2523	2106	1767	1621	1585	711
25°	2252	1651	1335	1207	1164	1035
35°	1835	1250	970	846	817	1145
45°	1334	900	682	612	593	1028
55°	841	600	473	431	420	759
65°	471	364	299	278	272	471
75°	208	171	147	140	135	223
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°	2666.4	2666.4	2666.4	2666.4	2666.4
2.5°	2647.6	2651.1	2563.1	2531.4	2512.6
5°	2640.6	2573.6	2409.3	2316.5	2283.6
7.5°	2619.4	2473.8	2214.4	2086.4	2052.3
10°	2599.5	2360.0	2041.8	1915.0	1878.6
12.5°	2566.6	2234.3	1903.2	1757.6	1714.2
15°	2523.2	2106.3	1767.0	1621.4	1585.0
17.5°	2471.5	1984.2	1643.7	1504.0	1464.1
20°	2411.6	1871.5	1538.1	1394.8	1362.0
22.5°	2336.5	1760.0	1430.1	1300.9	1264.5
25°	2251.9	1650.8	1335.0	1207.0	1163.5
27.5°	2161.5	1545.1	1246.9	1104.8	1059.0
30°	2057.0	1444.2	1156.5	1007.4	965.1
32.5°	1951.4	1344.4	1061.4	920.5	886.5
35°	1835.1	1250.4	969.8	846.5	817.2
37.5°	1717.7	1160.0	887.6	779.6	753.8
40°	1589.7	1072.0	812.5	717.4	696.2
42.5°	1461.8	983.9	744.4	662.2	642.2
45°	1333.8	900.5	682.2	611.7	592.9
47.5°	1204.6	818.4	624.6	562.4	547.1
50°	1080.2	740.9	570.6	516.6	503.7
52.5°	959.2	668.1	519.0	473.2	459.1
55°	840.7	600.0	473.2	430.9	420.3
57.5°	739.7	536.6	427.4	391.0	382.8
60°	643.4	475.5	383.9	353.4	345.2
62.5°	553.0	419.2	340.5	315.8	310.0
65°	470.8	364.0	299.4	278.3	272.4
67.5°	395.7	313.5	257.1	241.9	237.2
70°	329.9	263.0	219.6	206.6	203.1
72.5°	264.2	214.9	182.0	172.6	169.1
75°	207.8	171.4	146.8	139.7	135.0
77.5°	156.2	130.3	112.7	106.8	103.3
80°	108.0	92.8	79.8	77.5	74.0
82.5°	68.1	58.7	51.7	50.5	47.0
85°	34.0	31.7	27.0	27.0	24.7
87.5°	11.7	10.6	10.6	10.6	9.4
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	19.88	21.37	20.25	21.68	22.00	17.21	18.70	17.57	19.01	19.32
	3H	21.48	22.81	21.85	23.14	23.50	18.81	20.14	19.19	20.47	20.83
	4H	22.01	23.26	22.41	23.61	23.98	19.37	20.62	19.77	20.96	21.34
	6H	22.34	23.49	22.75	23.86	24.25	19.72	20.88	20.13	21.24	21.63
	8H	22.42	23.51	22.84	23.90	24.31	19.81	20.91	20.24	21.30	21.70
	12H	22.44	23.50	22.88	23.88	24.31	19.84	20.90	20.28	21.28	21.71
4H	2H	20.11	21.36	20.51	21.71	22.09	17.89	19.14	18.29	19.48	19.86
	3H	21.90	22.93	22.31	23.33	23.74	19.67	20.71	20.08	21.11	21.51
	4H	22.54	23.47	22.97	23.89	24.32	20.34	21.27	20.77	21.68	22.12
	6H	22.98	23.79	23.44	24.24	24.70	20.79	21.60	21.25	22.05	22.51
	8H	23.09	23.85	23.56	24.30	24.76	20.91	21.67	21.37	22.11	22.58
	12H	23.15	23.83	23.64	24.31	24.78	20.97	21.64	21.45	22.12	22.59
8H	4H	22.64	23.40	23.10	23.84	24.31	20.64	21.39	21.10	21.84	22.30
	6H	23.16	23.78	23.66	24.27	24.75	21.19	21.81	21.68	22.30	22.78
	8H	23.31	23.87	23.83	24.38	24.87	21.35	21.91	21.87	22.42	22.91
	12H	23.41	23.91	23.93	24.40	24.97	21.46	21.95	21.97	22.45	23.01
12H	4H	22.63	23.31	23.11	23.79	24.26	20.66	21.33	21.14	21.81	22.28
	6H	23.15	23.71	23.67	24.22	24.71	21.22	21.78	21.74	22.29	22.78
	8H	23.35	23.84	23.86	24.33	24.90	21.44	21.93	21.95	22.42	22.99