

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: P1217429

Luminaire Tested: S124DRP-S865D840-X4F0-XX-UDD-G-W

Issue Date: 4/9/2026

Test Information

Test Method: LM-79-2024
Report Number: P1217429
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-S865D840-X4F0-XX-UDD-G-W
Description: DEFINE 4, DIRECT RECESSED WITH GRAZE FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

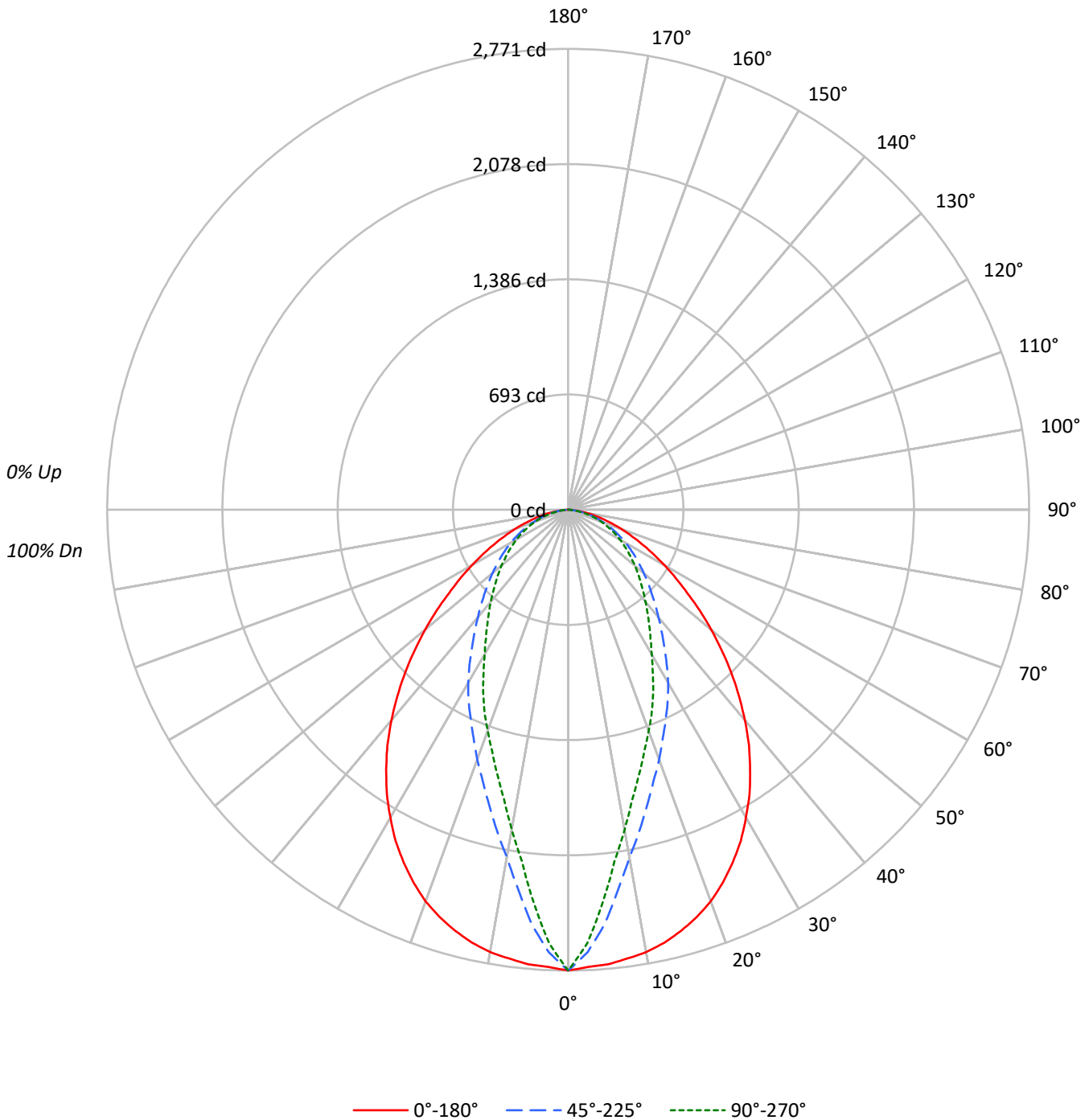
Lumens per Lamp: N/A
Luminaire Lumens: 3886.0 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 0.59 / 0.87
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 34.7
Input Voltage (V): 120
Input Current (A_{in}): 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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				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°	24498	24498	24498
5°	24353	22220	21062
10°	24252	19048	17526
15°	23999	16807	15076
20°	23578	15038	13316
25°	22829	13533	11795
30°	21823	12269	10239
35°	20583	10878	9166
40°	19067	9745	8350
45°	17330	8864	7703
50°	15440	8157	7199
55°	13466	7579	6733
60°	11823	7055	6343
65°	10236	6508	5923
70°	8862	5899	5457
75°	7379	5209	4793
80°	5713	4226	3915
85°	3591	2851	2597

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 17330 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	231.9	6.0
10°-20°	551.0	14.2
20°-30°	704.1	18.1
30°-40°	715.1	18.4
40°-50°	633.9	16.3
50°-60°	498.1	12.8
60°-70°	339.2	8.7
70°-80°	174.1	4.5
80°-90°	38.6	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°	1487.0	38.3
0°-40°	2202.0	56.7
0°-60°	3334.0	85.8
0°-90°	3886.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3886.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2771	2771	2771	2771	2771	
5°	2744	2674	2504	2407	2373	260
15°	2622	2189	1836	1685	1647	739
25°	2340	1715	1387	1254	1209	1075
35°	1907	1299	1008	880	849	1190
45°	1386	936	709	636	616	1068
55°	874	624	492	448	437	789
65°	489	378	311	289	283	490
75°	216	178	152	145	140	232
85°	35	33	28	28	26	47
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2770.8	2770.8	2770.8	2770.8	2770.8
2.5°	2751.3	2754.9	2663.4	2630.5	2611.0
5°	2744.0	2674.4	2503.6	2407.2	2373.1
7.5°	2722.0	2570.7	2301.1	2168.1	2132.7
10°	2701.3	2452.4	2121.7	1989.9	1952.1
12.5°	2667.1	2321.8	1977.7	1826.5	1781.3
15°	2621.9	2188.8	1836.2	1684.9	1647.1
17.5°	2568.3	2061.9	1708.1	1562.9	1521.4
20°	2506.0	1944.8	1598.3	1449.5	1415.3
22.5°	2428.0	1828.9	1486.1	1351.8	1314.0
25°	2340.1	1715.4	1387.2	1254.2	1209.1
27.5°	2246.2	1605.6	1295.7	1148.1	1100.5
30°	2137.6	1500.7	1201.8	1046.8	1002.9
32.5°	2027.8	1397.0	1102.9	956.5	921.2
35°	1907.0	1299.4	1007.8	879.7	849.2
37.5°	1785.0	1205.4	922.4	810.1	783.3
40°	1652.0	1113.9	844.3	745.5	723.5
42.5°	1519.0	1022.4	773.5	688.1	667.4
45°	1386.0	935.8	708.9	635.7	616.1
47.5°	1251.8	850.4	649.1	584.4	568.6
50°	1122.5	769.9	593.0	536.8	523.4
52.5°	996.8	694.2	539.3	491.7	477.1
55°	873.6	623.5	491.7	447.8	436.8
57.5°	768.6	557.6	444.1	406.3	397.7
60°	668.6	494.1	399.0	367.2	358.7
62.5°	574.7	435.6	353.8	328.2	322.1
65°	489.3	378.2	311.1	289.2	283.1
67.5°	411.2	325.8	267.2	251.3	246.5
70°	342.8	273.3	228.2	214.7	211.1
72.5°	274.5	223.3	189.1	179.4	175.7
75°	216.0	178.1	152.5	145.2	140.3
77.5°	162.3	135.4	117.1	111.0	107.4
80°	112.2	96.4	83.0	80.5	76.9
82.5°	70.8	61.0	53.7	52.5	48.8
85°	35.4	32.9	28.1	28.1	25.6
87.5°	12.2	11.0	11.0	11.0	9.8
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	20.02	21.50	20.38	21.82	22.13	17.34	18.83	17.71	19.14	19.46
	3H	21.61	22.94	21.99	23.27	23.63	18.94	20.27	19.32	20.60	20.96
	4H	22.14	23.39	22.54	23.74	24.12	19.50	20.75	19.90	21.10	21.48
	6H	22.47	23.63	22.88	23.99	24.38	19.85	21.01	20.27	21.38	21.77
	8H	22.55	23.65	22.98	24.04	24.44	19.94	21.04	20.37	21.43	21.83
	12H	22.58	23.63	23.01	24.01	24.44	19.98	21.03	20.41	21.41	21.84
4H	2H	20.25	21.50	20.65	21.85	22.22	18.02	19.27	18.42	19.62	20.00
	3H	22.03	23.07	22.44	23.47	23.87	19.81	20.84	20.22	21.24	21.64
	4H	22.67	23.60	23.10	24.02	24.46	20.47	21.40	20.90	21.82	22.26
	6H	23.12	23.93	23.57	24.37	24.83	20.93	21.74	21.38	22.18	22.64
	8H	23.23	23.98	23.69	24.43	24.90	21.04	21.80	21.51	22.24	22.71
	12H	23.29	23.96	23.77	24.44	24.91	21.10	21.78	21.59	22.26	22.73
8H	4H	22.77	23.53	23.24	23.97	24.44	20.77	21.53	21.23	21.97	22.44
	6H	23.29	23.91	23.79	24.41	24.88	21.32	21.94	21.82	22.43	22.91
	8H	23.45	24.01	23.96	24.52	25.00	21.49	22.04	22.00	22.56	23.04
	12H	23.55	24.04	24.06	24.53	25.10	21.59	22.09	22.10	22.58	23.14
12H	4H	22.76	23.44	23.25	23.92	24.39	20.79	21.47	21.28	21.95	22.42
	6H	23.29	23.84	23.80	24.36	24.84	21.36	21.92	21.87	22.43	22.91
	8H	23.48	23.97	23.99	24.46	25.03	21.57	22.06	22.08	22.55	23.12