

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: P1439941

Luminaire Tested: S124DR-S1005D835-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439941
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2509-563-1)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DR-S1005D835-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

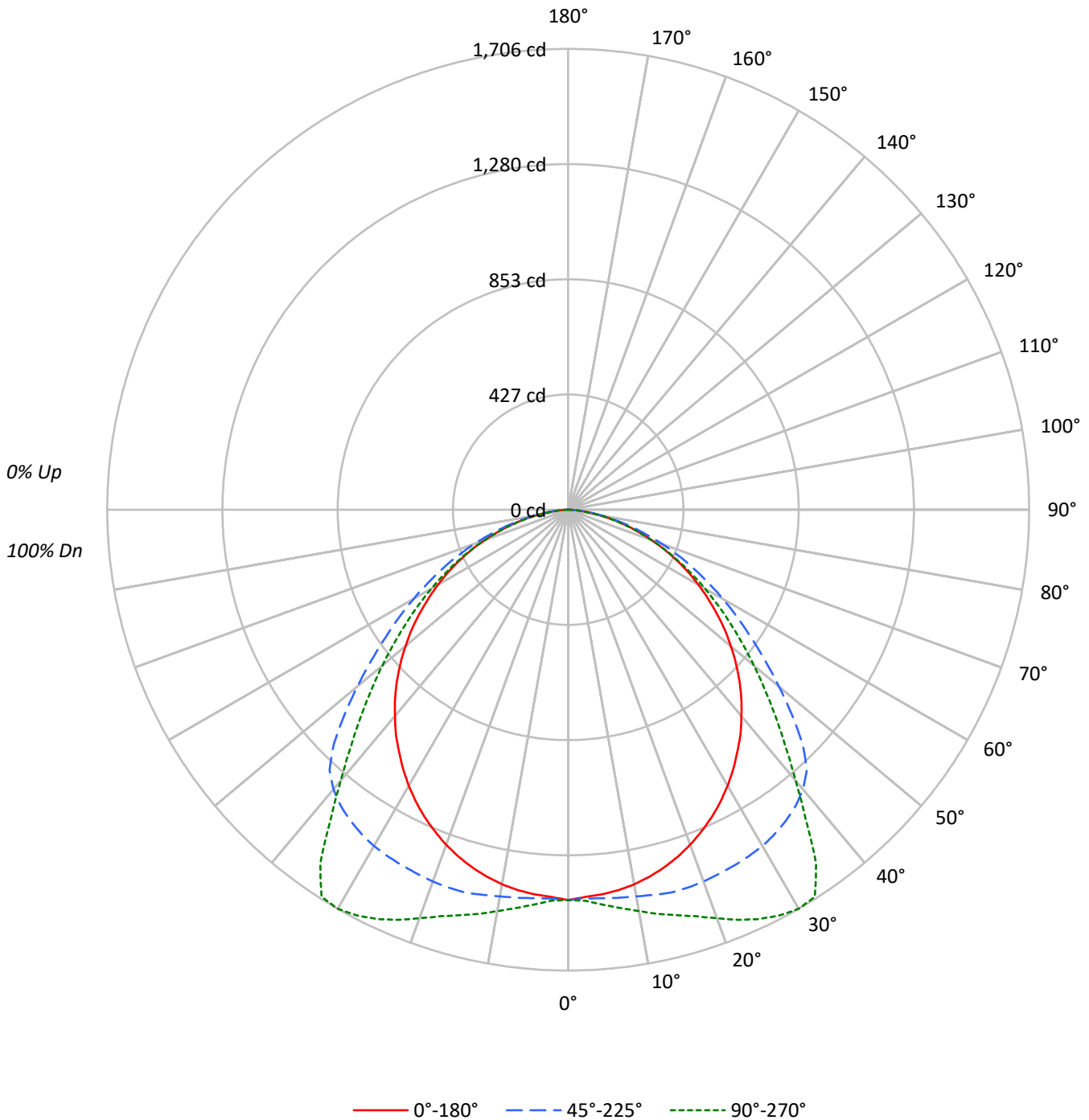
Lumens per Lamp: N/A
Luminaire Lumens: 4391.0 lumens
Efficiency: N/A
Efficacy: 104.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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

TEST NUMBER: P1439941

CATALOG NUMBER: S124DR-S1005D835-X4F0-XX-UDD-FLB-W

Luminous Intensity Polar Plot





TEST NUMBER: P1439941

CATALOG NUMBER: S124DR-S1005D835-X4F0-XX-UDD-FLB-W

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	109	105	101	97	107	103	99	95	98	95	92	94	92	90	91	89	87	85
2	100	92	85	80	97	90	84	79	86	81	77	83	79	75	80	77	73	71
3	91	81	73	67	89	79	72	66	76	70	65	74	68	64	71	66	63	60
4	83	72	63	57	81	70	62	56	68	61	55	66	60	55	63	58	54	52
5	77	64	55	49	75	63	55	49	61	54	48	59	53	47	57	52	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28
10	53	40	32	27	52	40	32	27	39	32	27	38	31	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12774	12774	12774
5°	12684	12810	13024
10°	12641	13047	13544
15°	12550	13432	14224
20°	12421	13781	15142
25°	12256	14177	16308
30°	12044	14678	17414
35°	11784	15166	17263
40°	11505	15596	15104
45°	11204	15336	13580
50°	10804	14004	12345
55°	10360	12742	11277
60°	9853	11683	10330
65°	9255	10649	9433
70°	8466	9531	8430
75°	7461	8185	7314
80°	6135	6568	5921
85°	4311	4464	4027

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 15336 cd/sqm



TEST NUMBER: P1439941

CATALOG NUMBER: S124DR-S1005D835-X4F0-XX-UDD-FLB-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.7	3.2
10°-20°	415.5	9.5
20°-30°	676.3	15.4
30°-40°	858.8	19.6
40°-50°	836.8	19.1
50°-60°	686.1	15.6
60°-70°	478.7	10.9
70°-80°	245.7	5.6
80°-90°	54.5	1.2
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°	1230.4	28.0
0°-40°	2089.2	47.6
0°-60°	3612.1	82.3
0°-90°	4391.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4391.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1445	1445	1445	1445	1445	
5°	1429	1450	1443	1453	1468	136
15°	1371	1414	1468	1526	1554	387
25°	1256	1337	1453	1604	1672	578
35°	1092	1198	1405	1609	1599	683
45°	896	1007	1226	1124	1086	691
55°	672	776	827	757	732	601
65°	442	506	509	468	451	438
75°	218	242	240	223	214	232
85°	42	44	44	41	40	54
90°	0	0	0	0	0	



TEST NUMBER: P1439941

CATALOG NUMBER: S124DR-S1005D835-X4F0-XX-UDD-FLB-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1444.8	1444.8	1444.8	1444.8	1444.8
2.5°	1434.9	1453.3	1440.6	1446.3	1449.1
5°	1429.2	1450.5	1443.4	1453.3	1467.5
7.5°	1420.7	1444.8	1449.1	1468.9	1487.4
10°	1408.0	1436.3	1453.3	1487.4	1508.6
12.5°	1391.0	1426.4	1460.4	1507.2	1532.7
15°	1371.1	1413.6	1467.5	1525.7	1554.0
17.5°	1347.0	1398.0	1467.5	1539.8	1578.1
20°	1320.1	1379.6	1464.7	1558.3	1609.3
22.5°	1288.9	1359.8	1459.0	1579.5	1643.3
25°	1256.3	1337.1	1453.3	1603.6	1671.7
27.5°	1219.4	1310.1	1446.3	1622.1	1693.0
30°	1179.7	1277.5	1437.7	1630.6	1705.7
32.5°	1137.2	1239.2	1423.6	1630.6	1698.6
35°	1091.8	1198.1	1405.1	1609.3	1599.4
37.5°	1047.8	1154.2	1382.5	1505.8	1443.4
40°	996.8	1107.4	1351.3	1359.8	1308.7
42.5°	948.6	1057.8	1307.3	1236.4	1191.0
45°	896.1	1006.7	1226.5	1124.4	1086.1
47.5°	842.2	951.4	1121.6	1023.7	988.3
50°	785.5	896.1	1018.1	928.7	897.5
52.5°	730.2	836.6	918.8	840.8	811.0
55°	672.1	775.6	826.6	757.2	731.6
57.5°	614.0	713.2	743.0	679.2	655.1
60°	557.2	646.6	660.7	605.4	584.2
62.5°	500.5	577.1	582.8	534.5	516.1
65°	442.4	506.2	509.0	467.9	450.9
67.5°	385.7	438.1	438.1	402.7	388.5
70°	327.5	371.5	368.7	340.3	326.1
72.5°	272.2	303.4	300.6	279.3	269.4
75°	218.4	242.5	239.6	222.6	214.1
77.5°	167.3	184.3	181.5	170.1	163.1
80°	120.5	130.4	129.0	120.5	116.3
82.5°	79.4	85.1	82.2	76.6	73.7
85°	42.5	44.0	44.0	41.1	39.7
87.5°	15.6	15.6	15.6	15.6	14.2
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1439941
 CATALOG NUMBER: S124DR-S1005D835-X4F0-XX-UDD-FLB-W

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	20.53	22.13	20.90	22.45	22.76	20.32	21.92	20.68	22.23	22.55
	3H	22.04	23.48	22.42	23.80	24.17	21.79	23.23	22.17	23.56	23.92
	4H	22.54	23.89	22.94	24.24	24.62	22.29	23.64	22.69	23.99	24.36
	6H	22.86	24.11	23.27	24.48	24.87	22.60	23.86	23.01	24.22	24.61
	8H	22.94	24.14	23.37	24.53	24.93	22.68	23.87	23.10	24.26	24.66
	12H	22.98	24.13	23.41	24.51	24.94	22.71	23.86	23.14	24.24	24.67
4H	2H	21.16	22.51	21.56	22.86	23.23	20.99	22.34	21.39	22.69	23.07
	3H	22.89	24.01	23.30	24.41	24.81	22.65	23.78	23.06	24.18	24.58
	4H	23.51	24.53	23.95	24.95	25.38	23.25	24.27	23.68	24.68	25.12
	6H	23.94	24.83	24.40	25.27	25.73	23.66	24.55	24.12	24.99	25.45
	8H	24.05	24.88	24.52	25.33	25.79	23.77	24.60	24.23	25.04	25.50
	12H	24.12	24.86	24.60	25.34	25.81	23.83	24.57	24.31	25.04	25.51
8H	4H	23.76	24.58	24.22	25.03	25.49	23.52	24.35	23.99	24.79	25.26
	6H	24.28	24.97	24.77	25.45	25.93	24.02	24.71	24.52	25.20	25.68
	8H	24.44	25.06	24.96	25.57	26.05	24.17	24.79	24.68	25.30	25.78
	12H	24.55	25.10	25.06	25.59	26.15	24.27	24.82	24.78	25.31	25.87
12H	4H	23.77	24.51	24.25	24.99	25.46	23.54	24.28	24.02	24.76	25.23
	6H	24.30	24.92	24.81	25.43	25.91	24.05	24.67	24.57	25.18	25.67
	8H	24.51	25.06	25.02	25.55	26.11	24.25	24.79	24.76	25.28	25.84