

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: P1439808

Luminaire Tested: S123DR-S1005D850-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439808
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G3-2603-719-3)
Test Lab: INNOVATION CENTER
Issue Date: 4/2/2026
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DR-S1005D850-X4F0-XX-UDD-FLB-W
Description: DEFINE 3, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

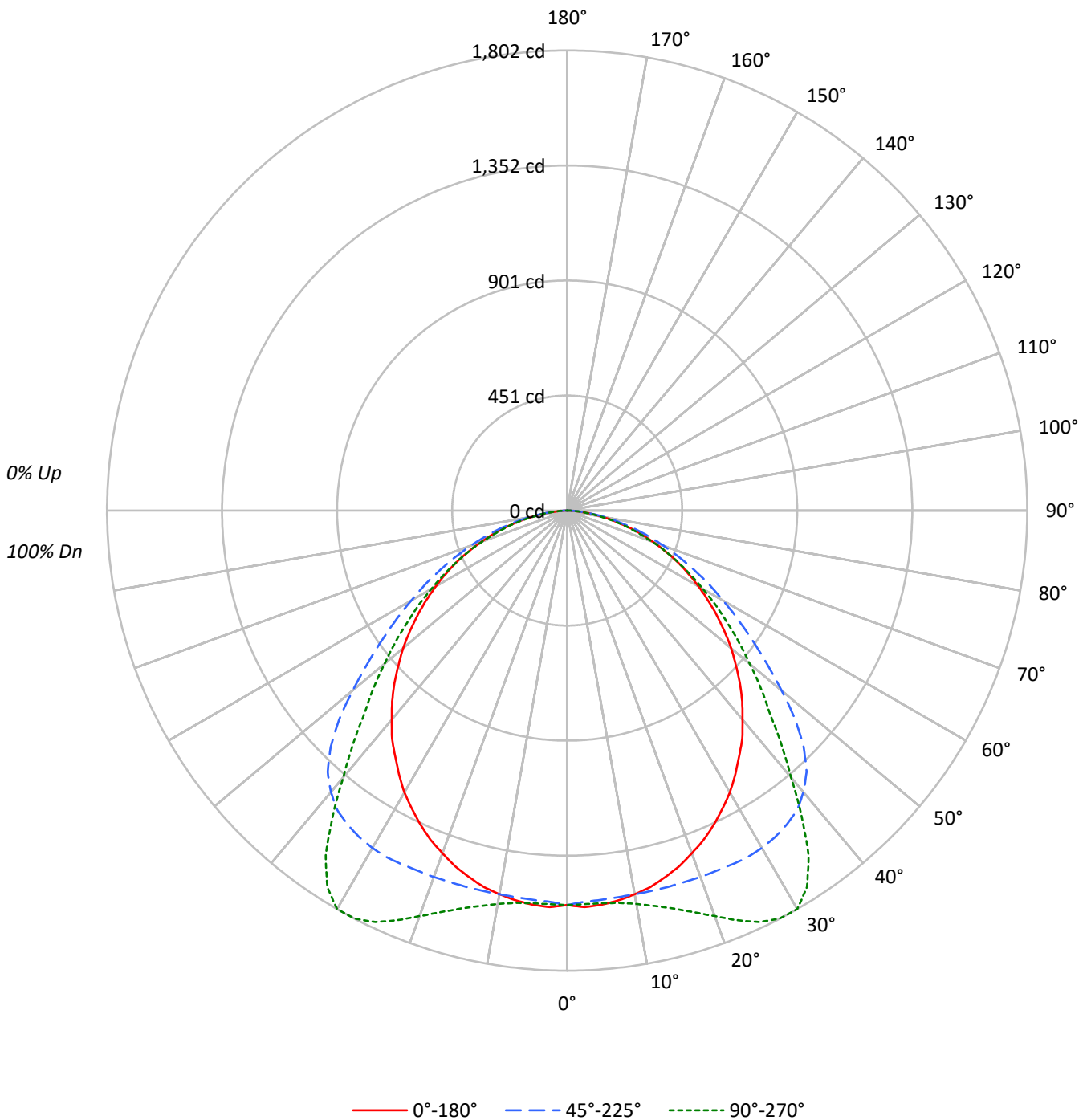
Lumens per Lamp: N/A
Luminaire Lumens: 4671.9 lumens
Efficiency: N/A
Efficacy: 111.5 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.52 / 1.52
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
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	109	105	100	97	106	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	92	85	79	97	90	84	78	86	81	77	83	79	75	80	76	73	71
3	91	81	73	66	88	79	72	66	76	70	65	73	68	63	71	66	62	60
4	83	72	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	52
5	77	64	55	49	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34
8	61	48	39	33	59	47	39	33	46	38	33	44	38	33	43	37	33	31
9	57	44	35	30	56	43	35	30	42	35	30	41	34	30	40	34	29	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°	18622	18622	18622
5°	18752	18520	18674
10°	18676	18676	19145
15°	18542	19041	20137
20°	18321	19593	21683
25°	18061	20336	23650
30°	17746	21237	25084
35°	17279	22076	24263
40°	16818	22651	21469
45°	16314	22333	19119
50°	15729	20553	17496
55°	15042	18600	16082
60°	14328	17024	14791
65°	13625	15585	13671
70°	12613	14132	12387
75°	11385	12577	11087
80°	9540	10533	9095
85°	7290	7733	6847

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 22333 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	147.1	3.1
10°-20°	437.0	9.4
20°-30°	716.3	15.3
30°-40°	906.1	19.4
40°-50°	885.2	18.9
50°-60°	727.2	15.6
60°-70°	513.0	11.0
70°-80°	273.4	5.9
80°-90°	66.6	1.4
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°	1300.4	27.8
0°-40°	2206.4	47.2
0°-60°	3818.9	81.7
0°-90°	4671.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4671.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1545	1545	1545	1545	1545	
5°	1549	1543	1530	1546	1543	147
15°	1486	1494	1526	1594	1613	419
25°	1358	1398	1529	1714	1778	625
35°	1174	1256	1500	1674	1648	735
45°	957	1065	1310	1182	1121	737
55°	716	823	885	796	765	640
65°	478	546	546	498	479	471
75°	244	275	270	244	238	259
85°	53	58	56	51	50	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1544.6	1544.6	1544.6	1544.6	1544.6
2.5°	1554.2	1549.4	1533.4	1547.8	1543.0
5°	1549.4	1543.0	1530.3	1546.2	1543.0
7.5°	1539.8	1536.6	1527.1	1551.0	1549.4
10°	1525.5	1523.9	1525.5	1560.6	1563.8
12.5°	1509.5	1511.1	1525.5	1575.0	1586.2
15°	1485.5	1493.5	1525.5	1594.1	1613.3
17.5°	1460.0	1472.7	1525.5	1619.7	1648.5
20°	1428.0	1450.4	1527.1	1646.9	1690.0
22.5°	1396.1	1423.2	1527.1	1683.6	1736.3
25°	1357.7	1397.7	1528.7	1713.9	1777.8
27.5°	1316.2	1364.1	1530.3	1737.9	1801.8
30°	1274.7	1332.2	1525.5	1747.5	1801.8
32.5°	1225.2	1295.4	1515.9	1731.5	1747.5
35°	1174.0	1255.5	1499.9	1674.0	1648.5
37.5°	1126.1	1212.4	1479.1	1568.6	1507.9
40°	1068.6	1166.1	1439.2	1434.4	1364.1
42.5°	1014.3	1116.5	1388.1	1298.6	1241.1
45°	956.8	1065.4	1309.8	1182.0	1121.3
47.5°	896.1	1009.5	1210.8	1071.8	1028.7
50°	838.6	952.0	1095.8	971.2	932.8
52.5°	776.3	891.3	985.6	881.7	848.2
55°	715.6	822.6	884.9	795.5	765.1
57.5°	654.9	755.5	792.3	714.0	690.1
60°	594.2	685.3	706.0	638.9	613.4
62.5°	535.1	619.8	626.2	567.1	544.7
65°	477.6	546.3	546.3	498.4	479.2
67.5°	416.9	476.0	472.8	428.1	416.9
70°	357.8	407.3	400.9	364.2	351.4
72.5°	301.9	338.6	333.8	305.1	290.7
75°	244.4	274.7	270.0	244.4	238.0
77.5°	190.1	210.8	206.1	188.5	183.7
80°	137.4	153.3	151.7	139.0	131.0
82.5°	92.6	100.6	99.0	91.0	86.3
85°	52.7	57.5	55.9	51.1	49.5
87.5°	20.8	24.0	25.6	24.0	22.4
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	21.80	23.40	22.16	23.72	24.03	21.53	23.13	21.89	23.44	23.76
	3H	23.37	24.81	23.75	25.14	25.50	23.04	24.49	23.42	24.81	25.17
	4H	23.92	25.28	24.32	25.63	26.00	23.58	24.94	23.97	25.28	25.66
	6H	24.28	25.54	24.70	25.91	26.30	23.93	25.19	24.35	25.56	25.95
	8H	24.38	25.58	24.81	25.97	26.37	24.03	25.23	24.45	25.62	26.02
	12H	24.44	25.59	24.87	25.97	26.40	24.08	25.23	24.51	25.61	26.04
4H	2H	22.44	23.80	22.84	24.14	24.52	22.22	23.58	22.62	23.93	24.31
	3H	24.24	25.38	24.65	25.78	26.18	23.94	25.07	24.35	25.47	25.87
	4H	24.93	25.96	25.36	26.37	26.81	24.58	25.60	25.01	26.01	26.45
	6H	25.41	26.31	25.87	26.75	27.20	25.04	25.93	25.49	26.37	26.83
	8H	25.55	26.38	26.01	26.82	27.29	25.16	26.00	25.62	26.44	26.91
	12H	25.63	26.38	26.11	26.86	27.33	25.24	25.99	25.72	26.47	26.94
8H	4H	25.20	26.03	25.66	26.47	26.94	24.88	25.72	25.35	26.16	26.63
	6H	25.79	26.48	26.28	26.97	27.45	25.44	26.14	25.94	26.63	27.10
	8H	25.98	26.60	26.49	27.11	27.60	25.62	26.25	26.13	26.75	27.24
	12H	26.12	26.67	26.63	27.16	27.72	25.75	26.30	26.26	26.79	27.36
12H	4H	25.21	25.96	25.69	26.44	26.91	24.91	25.66	25.39	26.14	26.61
	6H	25.82	26.44	26.33	26.95	27.44	25.49	26.11	26.00	26.62	27.11
	8H	26.06	26.61	26.57	27.10	27.67	25.72	26.27	26.23	26.76	27.32