

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: P1439943

Luminaire Tested: S124DR-S1005D850-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439943
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-S1005D850-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

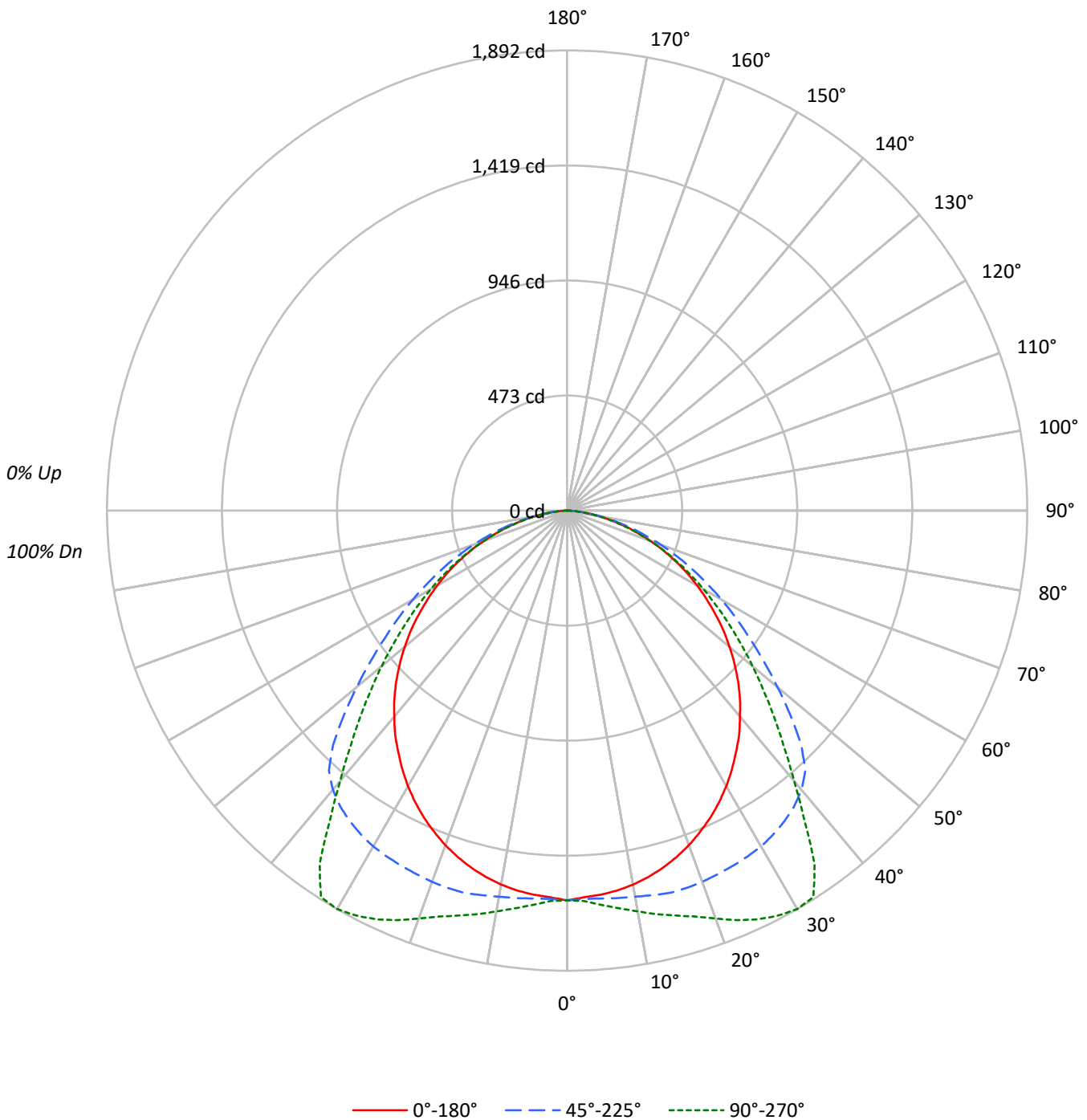
Lumens per Lamp: N/A
Luminaire Lumens: 4869.6 lumens
Efficiency: N/A
Efficacy: 116.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

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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	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°	14167	14167	14167
5°	14067	14207	14444
10°	14018	14470	15021
15°	13918	14897	15775
20°	13774	15283	16792
25°	13591	15724	18085
30°	13357	16278	19313
35°	13069	16819	19144
40°	12758	17295	16751
45°	12426	17007	15061
50°	11982	15529	13691
55°	11488	14130	12507
60°	10928	12958	11455
65°	10264	11810	10460
70°	9389	10568	9350
75°	8274	9076	8110
80°	6807	7286	6563
85°	4788	4940	4464

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 17007 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	153.8	3.2
10°-20°	460.7	9.5
20°-30°	750.0	15.4
30°-40°	952.4	19.6
40°-50°	928.0	19.1
50°-60°	760.9	15.6
60°-70°	530.9	10.9
70°-80°	272.5	5.6
80°-90°	60.4	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°	1364.5	28.0
0°-40°	2316.9	47.6
0°-60°	4005.8	82.3
0°-90°	4869.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4869.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1602	1602	1602	1602	1602	
5°	1585	1609	1601	1612	1628	151
15°	1521	1568	1628	1692	1723	429
25°	1393	1483	1612	1778	1854	641
35°	1211	1329	1558	1785	1774	758
45°	994	1116	1360	1247	1204	766
55°	745	860	917	840	811	666
65°	491	561	564	519	500	486
75°	242	269	266	247	237	258
85°	47	49	49	46	44	60
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1602.3	1602.3	1602.3	1602.3	1602.3
2.5°	1591.3	1611.8	1597.6	1603.9	1607.0
5°	1585.0	1608.6	1600.8	1611.8	1627.5
7.5°	1575.6	1602.3	1607.0	1629.1	1649.5
10°	1561.4	1592.9	1611.8	1649.5	1673.1
12.5°	1542.6	1581.9	1619.6	1671.5	1699.8
15°	1520.6	1567.7	1627.5	1692.0	1723.4
17.5°	1493.8	1550.4	1627.5	1707.7	1750.1
20°	1464.0	1530.0	1624.3	1728.1	1784.7
22.5°	1429.4	1508.0	1618.1	1751.7	1822.5
25°	1393.2	1482.8	1611.8	1778.4	1853.9
27.5°	1352.3	1452.9	1603.9	1798.9	1877.5
30°	1308.3	1416.8	1594.5	1808.3	1891.7
32.5°	1261.1	1374.3	1578.7	1808.3	1883.8
35°	1210.8	1328.7	1558.3	1784.7	1773.7
37.5°	1162.0	1280.0	1533.1	1669.9	1600.8
40°	1105.4	1228.1	1498.5	1508.0	1451.4
42.5°	1052.0	1173.0	1449.8	1371.2	1320.9
45°	993.8	1116.4	1360.2	1247.0	1204.5
47.5°	934.0	1055.1	1243.8	1135.3	1096.0
50°	871.1	993.8	1129.0	1030.0	995.4
52.5°	809.8	927.7	1018.9	932.5	899.4
55°	745.3	860.1	916.7	839.7	811.4
57.5°	680.9	790.9	824.0	753.2	726.5
60°	618.0	717.0	732.8	671.4	647.8
62.5°	555.1	640.0	646.3	592.8	572.4
65°	490.6	561.4	564.5	518.9	500.0
67.5°	427.7	485.9	485.9	446.6	430.9
70°	363.2	412.0	408.8	377.4	361.7
72.5°	301.9	336.5	333.4	309.8	298.8
75°	242.2	268.9	265.7	246.9	237.4
77.5°	185.5	204.4	201.3	188.7	180.8
80°	133.7	144.7	143.1	133.7	128.9
82.5°	88.1	94.3	91.2	84.9	81.8
85°	47.2	48.7	48.7	45.6	44.0
87.5°	17.3	17.3	17.3	17.3	15.7
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	20.89	22.49	21.26	22.81	23.12	20.68	22.28	21.04	22.59	22.91
	3H	22.40	23.84	22.77	24.16	24.52	22.15	23.59	22.53	23.92	24.28
	4H	22.90	24.25	23.30	24.60	24.98	22.65	24.00	23.04	24.35	24.72
	6H	23.22	24.47	23.63	24.84	25.23	22.96	24.21	23.37	24.58	24.97
	8H	23.30	24.50	23.73	24.89	25.29	23.04	24.23	23.46	24.62	25.02
	12H	23.34	24.49	23.77	24.87	25.30	23.07	24.22	23.50	24.60	25.03
4H	2H	21.52	22.87	21.91	23.22	23.59	21.35	22.70	21.75	23.05	23.42
	3H	23.25	24.37	23.66	24.77	25.17	23.01	24.14	23.42	24.54	24.94
	4H	23.87	24.89	24.31	25.30	25.74	23.61	24.63	24.04	25.04	25.48
	6H	24.30	25.19	24.76	25.63	26.09	24.02	24.91	24.48	25.35	25.81
	8H	24.41	25.24	24.88	25.69	26.15	24.13	24.96	24.59	25.40	25.86
	12H	24.48	25.22	24.96	25.70	26.17	24.19	24.93	24.67	25.40	25.87
8H	4H	24.12	24.94	24.58	25.39	25.85	23.88	24.71	24.34	25.15	25.62
	6H	24.64	25.33	25.13	25.81	26.29	24.38	25.07	24.88	25.56	26.04
	8H	24.80	25.42	25.32	25.93	26.41	24.53	25.15	25.04	25.66	26.14
	12H	24.91	25.46	25.42	25.95	26.51	24.63	25.18	25.14	25.67	26.23
12H	4H	24.13	24.87	24.61	25.35	25.82	23.90	24.64	24.38	25.12	25.59
	6H	24.66	25.28	25.17	25.78	26.27	24.41	25.03	24.93	25.54	26.02
	8H	24.87	25.41	25.38	25.91	26.47	24.61	25.15	25.11	25.64	26.20