

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: P1439942

Luminaire Tested: S124DR-S1005D840-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439942
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-S1005D840-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

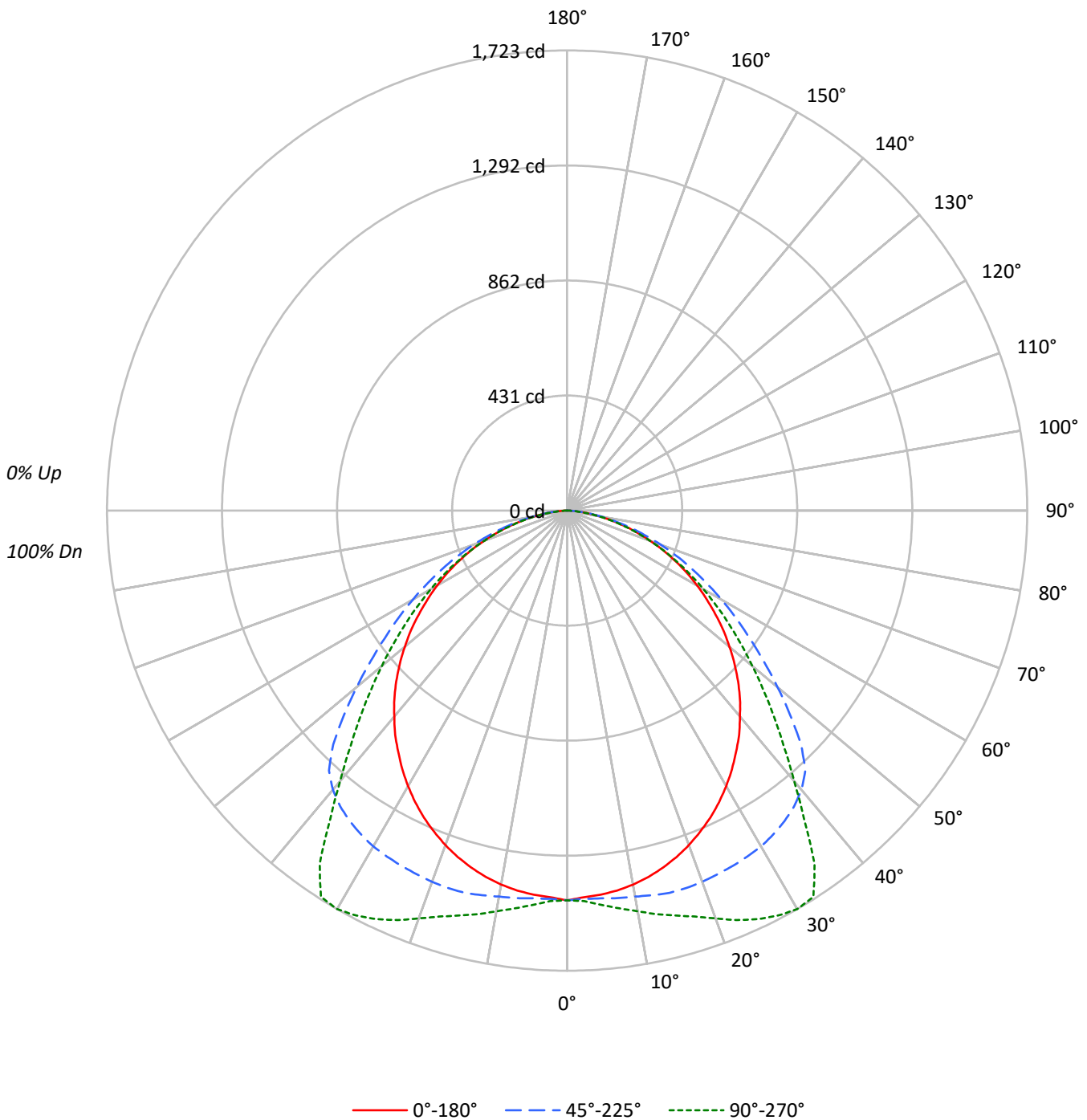
Lumens per Lamp: N/A
Luminaire Lumens: 4434.3 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 41.9
Input Voltage (V): 120
Input Current (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	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°	12900	12900	12900
5°	12810	12937	13153
10°	12765	13177	13678
15°	12674	13565	14364
20°	12543	13917	15291
25°	12377	14318	16469
30°	12162	14823	17586
35°	11901	15316	17433
40°	11618	15750	15253
45°	11316	15487	13714
50°	10912	14141	12467
55°	10462	12868	11390
60°	9950	11800	10431
65°	9345	10753	9525
70°	8551	9624	8513
75°	7532	8267	7385
80°	6196	6634	5977
85°	4362	4504	4068

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 15487 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	140.0	3.2
10°-20°	419.6	9.5
20°-30°	682.9	15.4
30°-40°	867.3	19.6
40°-50°	845.1	19.1
50°-60°	692.9	15.6
60°-70°	483.4	10.9
70°-80°	248.1	5.6
80°-90°	55.0	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°	1242.5	28.0
0°-40°	2109.8	47.6
0°-60°	3647.7	82.3
0°-90°	4434.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4434.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1459	1459	1459	1459	1459	
5°	1443	1465	1458	1468	1482	137
15°	1385	1428	1482	1541	1569	390
25°	1269	1350	1468	1620	1688	584
35°	1103	1210	1419	1625	1615	690
45°	905	1017	1239	1136	1097	697
55°	679	783	835	765	739	607
65°	447	511	514	472	455	442
75°	220	245	242	225	216	235
85°	43	44	44	42	40	54
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1459.1	1459.1	1459.1	1459.1	1459.1
2.5°	1449.1	1467.7	1454.8	1460.5	1463.4
5°	1443.3	1464.8	1457.7	1467.7	1482.0
7.5°	1434.8	1459.1	1463.4	1483.4	1502.0
10°	1421.9	1450.5	1467.7	1502.0	1523.5
12.5°	1404.7	1440.5	1474.8	1522.1	1547.9
15°	1384.6	1427.6	1482.0	1540.7	1569.3
17.5°	1360.3	1411.8	1482.0	1555.0	1593.7
20°	1333.1	1393.2	1479.1	1573.6	1625.2
22.5°	1301.6	1373.2	1473.4	1595.1	1659.6
25°	1268.7	1350.3	1467.7	1619.5	1688.2
27.5°	1231.4	1323.1	1460.5	1638.1	1709.7
30°	1191.3	1290.1	1451.9	1646.7	1722.6
32.5°	1148.4	1251.5	1437.6	1646.7	1715.4
35°	1102.6	1209.9	1419.0	1625.2	1615.2
37.5°	1058.2	1165.6	1396.1	1520.7	1457.7
40°	1006.6	1118.3	1364.6	1373.2	1321.6
42.5°	957.9	1068.2	1320.2	1248.6	1202.8
45°	905.0	1016.6	1238.6	1135.5	1096.8
47.5°	850.5	960.8	1132.6	1033.8	998.0
50°	793.3	905.0	1028.1	937.9	906.4
52.5°	737.4	844.8	927.9	849.1	819.0
55°	678.7	783.2	834.8	764.6	738.9
57.5°	620.0	720.2	750.3	685.9	661.5
60°	562.7	652.9	667.3	611.4	589.9
62.5°	505.5	582.8	588.5	539.8	521.2
65°	446.7	511.2	514.0	472.5	455.3
67.5°	389.5	442.5	442.5	406.7	392.3
70°	330.8	375.2	372.3	343.7	329.3
72.5°	274.9	306.4	303.6	282.1	272.1
75°	220.5	244.9	242.0	224.8	216.2
77.5°	169.0	186.1	183.3	171.8	164.7
80°	121.7	131.7	130.3	121.7	117.4
82.5°	80.2	85.9	83.0	77.3	74.5
85°	43.0	44.4	44.4	41.5	40.1
87.5°	15.8	15.8	15.8	15.8	14.3
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	20.57	22.17	20.93	22.48	22.80	20.35	21.95	20.72	22.27	22.58
	3H	22.07	23.51	22.45	23.84	24.20	21.82	23.26	22.20	23.59	23.95
	4H	22.57	23.93	22.97	24.28	24.65	22.32	23.67	22.72	24.02	24.40
	6H	22.90	24.15	23.31	24.51	24.90	22.64	23.89	23.05	24.25	24.65
	8H	22.98	24.17	23.40	24.56	24.96	22.71	23.91	23.14	24.30	24.70
	12H	23.02	24.16	23.45	24.54	24.97	22.75	23.89	23.18	24.27	24.70
4H	2H	21.19	22.54	21.59	22.89	23.27	21.02	22.37	21.42	22.72	23.10
	3H	22.92	24.05	23.33	24.45	24.85	22.69	23.82	23.10	24.21	24.61
	4H	23.55	24.57	23.98	24.98	25.42	23.29	24.30	23.72	24.72	25.15
	6H	23.98	24.86	24.43	25.30	25.76	23.70	24.58	24.15	25.03	25.48
	8H	24.09	24.92	24.55	25.36	25.83	23.80	24.63	24.26	25.07	25.54
	12H	24.15	24.90	24.63	25.37	25.84	23.86	24.60	24.34	25.08	25.55
8H	4H	23.79	24.62	24.25	25.06	25.53	23.56	24.39	24.02	24.83	25.29
	6H	24.31	25.00	24.81	25.49	25.96	24.06	24.74	24.55	25.23	25.71
	8H	24.48	25.09	24.99	25.60	26.09	24.21	24.82	24.72	25.33	25.82
	12H	24.59	25.13	25.10	25.62	26.19	24.31	24.85	24.81	25.34	25.90
12H	4H	23.80	24.54	24.28	25.02	25.49	23.58	24.32	24.06	24.79	25.26
	6H	24.34	24.95	24.85	25.46	25.95	24.09	24.71	24.60	25.21	25.70
	8H	24.55	25.09	25.05	25.58	26.14	24.28	24.83	24.79	25.32	25.88