

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: P1439940

Luminaire Tested: S124DR-S1005D830-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439940
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-S1005D830-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

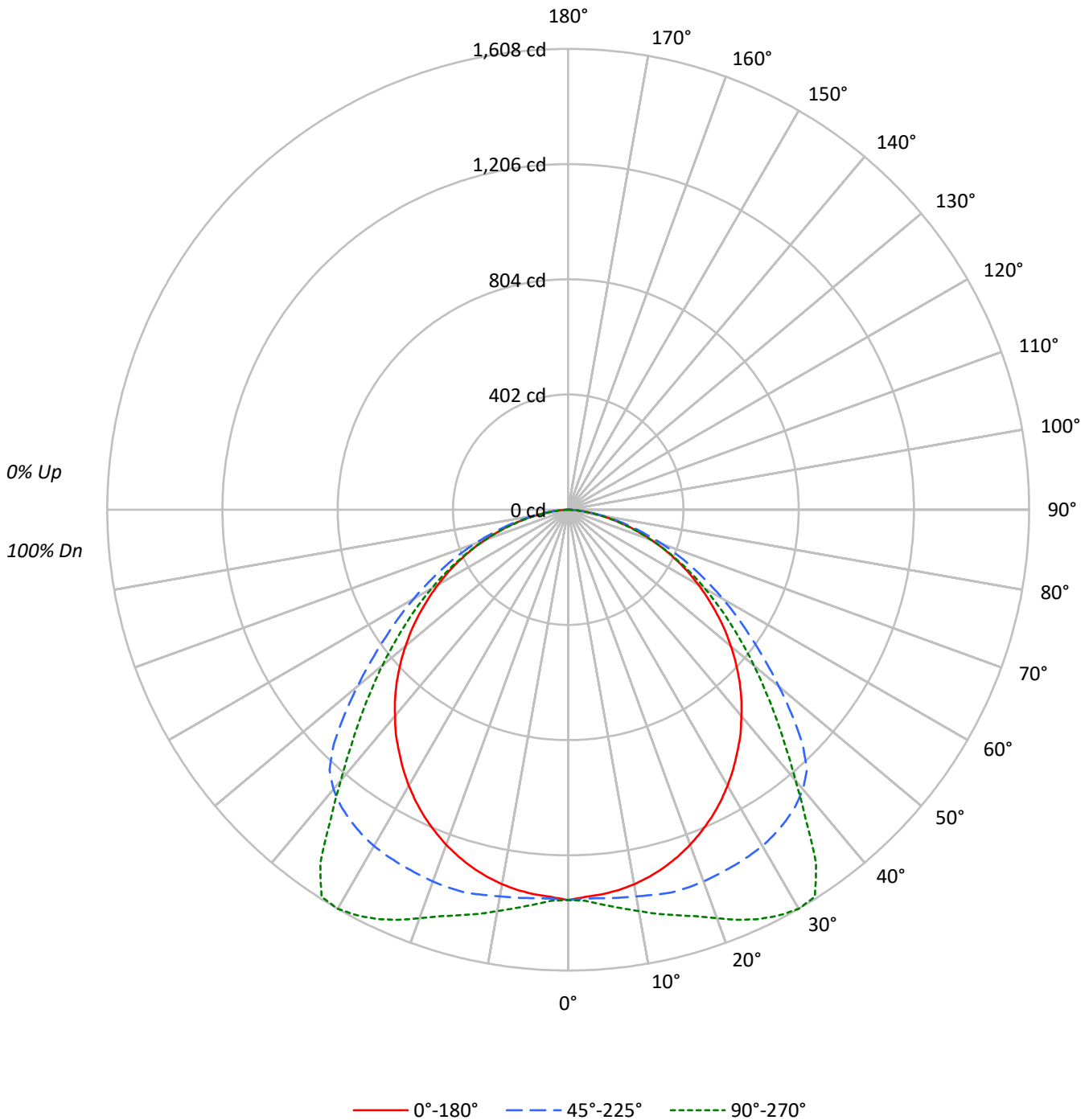
Lumens per Lamp: N/A
Luminaire Lumens: 4138.7 lumens
Efficiency: N/A
Efficacy: 98.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12040	12040	12040
5°	11956	12075	12276
10°	11914	12298	12766
15°	11829	12661	13407
20°	11706	12989	14271
25°	11551	13363	15372
30°	11352	13834	16413
35°	11107	14295	16271
40°	10843	14699	14237
45°	10561	14454	12800
50°	10184	13199	11637
55°	9765	12009	10630
60°	9287	11013	9736
65°	8724	10038	8891
70°	7980	8983	7946
75°	7030	7717	6894
80°	5784	6191	5580
85°	4068	4200	3794

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 14454 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.7	3.2
10°-20°	391.6	9.5
20°-30°	637.4	15.4
30°-40°	809.4	19.6
40°-50°	788.7	19.1
50°-60°	646.7	15.6
60°-70°	451.2	10.9
70°-80°	231.6	5.6
80°-90°	51.4	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°	1159.7	28.0
0°-40°	1969.1	47.6
0°-60°	3404.6	82.3
0°-90°	4138.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4138.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1362	1362	1362	1362	1362	
5°	1347	1367	1360	1370	1383	128
15°	1292	1332	1383	1438	1465	364
25°	1184	1260	1370	1512	1576	545
35°	1029	1129	1324	1517	1508	644
45°	845	949	1156	1060	1024	651
55°	634	731	779	714	690	566
65°	417	477	480	441	425	413
75°	206	228	226	210	202	219
85°	40	41	41	39	37	51
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1361.8	1361.8	1361.8	1361.8	1361.8
2.5°	1352.5	1369.8	1357.8	1363.2	1365.8
5°	1347.1	1367.2	1360.5	1369.8	1383.2
7.5°	1339.1	1361.8	1365.8	1384.5	1401.9
10°	1327.1	1353.8	1369.8	1401.9	1422.0
12.5°	1311.0	1344.4	1376.5	1420.6	1444.7
15°	1292.3	1332.4	1383.2	1438.0	1464.7
17.5°	1269.6	1317.7	1383.2	1451.4	1487.4
20°	1244.2	1300.3	1380.5	1468.7	1516.8
22.5°	1214.8	1281.6	1375.2	1488.8	1548.9
25°	1184.1	1260.3	1369.8	1511.5	1575.7
27.5°	1149.3	1234.9	1363.2	1528.9	1595.7
30°	1111.9	1204.1	1355.1	1536.9	1607.7
32.5°	1071.8	1168.0	1341.8	1536.9	1601.0
35°	1029.1	1129.3	1324.4	1516.8	1507.5
37.5°	987.6	1087.9	1303.0	1419.3	1360.5
40°	939.5	1043.8	1273.6	1281.6	1233.5
42.5°	894.1	997.0	1232.2	1165.4	1122.6
45°	844.6	948.9	1156.0	1059.8	1023.7
47.5°	793.8	896.7	1057.1	964.9	931.5
50°	740.4	844.6	959.6	875.4	846.0
52.5°	688.3	788.5	866.0	792.5	764.4
55°	633.5	731.0	779.1	713.7	689.6
57.5°	578.7	672.2	700.3	640.1	617.4
60°	525.2	609.4	622.8	570.7	550.6
62.5°	471.8	543.9	549.3	503.8	486.5
65°	417.0	477.1	479.8	441.0	425.0
67.5°	363.5	413.0	413.0	379.5	366.2
70°	308.7	350.1	347.5	320.7	307.4
72.5°	256.6	286.0	283.3	263.3	253.9
75°	205.8	228.5	225.9	209.8	201.8
77.5°	157.7	173.7	171.1	160.4	153.7
80°	113.6	123.0	121.6	113.6	109.6
82.5°	74.8	80.2	77.5	72.2	69.5
85°	40.1	41.4	41.4	38.8	37.4
87.5°	14.7	14.7	14.7	14.7	13.4
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	20.33	21.93	20.69	22.24	22.56	20.11	21.71	20.48	22.03	22.34
	3H	21.83	23.27	22.21	23.60	23.96	21.58	23.02	21.96	23.35	23.71
	4H	22.34	23.69	22.73	24.04	24.41	22.08	23.43	22.48	23.78	24.16
	6H	22.66	23.91	23.07	24.27	24.66	22.40	23.65	22.81	24.01	24.41
	8H	22.74	23.93	23.16	24.32	24.72	22.47	23.67	22.90	24.06	24.46
	12H	22.78	23.92	23.21	24.30	24.73	22.51	23.65	22.94	24.03	24.46
4H	2H	20.95	22.30	21.35	22.65	23.03	20.78	22.13	21.18	22.48	22.86
	3H	22.68	23.81	23.09	24.21	24.61	22.45	23.58	22.86	23.97	24.37
	4H	23.31	24.33	23.74	24.74	25.18	23.05	24.06	23.48	24.48	24.91
	6H	23.74	24.62	24.19	25.06	25.52	23.46	24.34	23.91	24.79	25.24
	8H	23.85	24.68	24.31	25.12	25.59	23.56	24.39	24.02	24.83	25.30
	12H	23.91	24.66	24.39	25.13	25.60	23.62	24.36	24.10	24.84	25.31
8H	4H	23.55	24.38	24.01	24.82	25.29	23.32	24.15	23.78	24.59	25.05
	6H	24.07	24.76	24.57	25.25	25.73	23.82	24.50	24.31	24.99	25.47
	8H	24.24	24.85	24.75	25.36	25.85	23.97	24.58	24.48	25.09	25.58
	12H	24.35	24.89	24.86	25.38	25.95	24.07	24.61	24.57	25.10	25.66
12H	4H	23.56	24.30	24.04	24.78	25.25	23.34	24.08	23.82	24.55	25.02
	6H	24.10	24.71	24.61	25.22	25.71	23.85	24.47	24.36	24.97	25.46
	8H	24.31	24.85	24.81	25.34	25.90	24.04	24.59	24.55	25.08	25.64