

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: P1439897

Luminaire Tested: S124DR-H1005D840-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

Test Information

Test Method: LM-79-2024
Report Number: P1439897
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-H1005D840-X4F0-XX-UDD-FLB-W
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

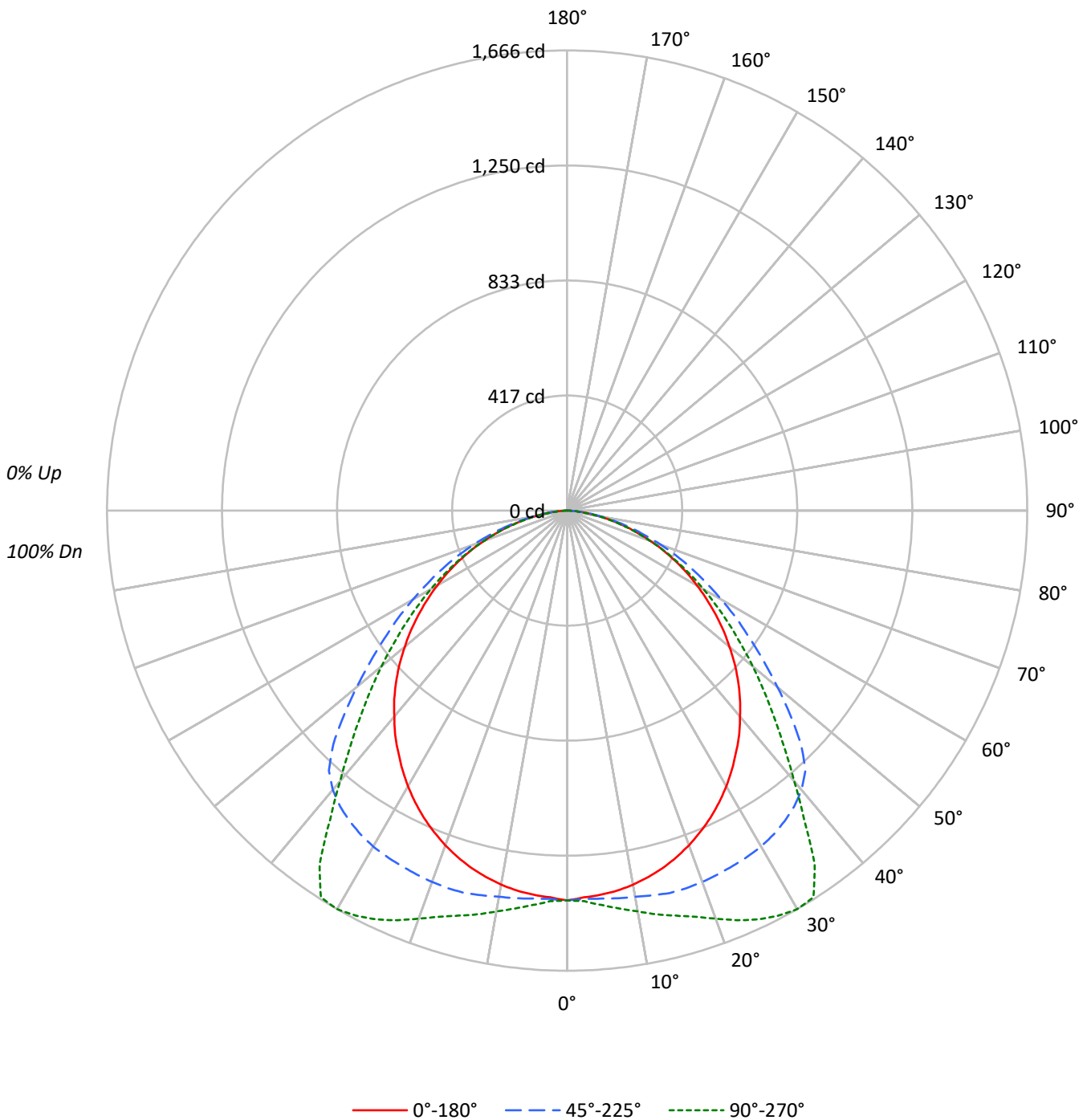
Lumens per Lamp: N/A
Luminaire Lumens: 4289.4 lumens
Efficiency: N/A
Efficacy: 117.2 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.53 / 1.51
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 36.6
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°	12479	12479	12479
5°	12391	12514	12723
10°	12348	12746	13231
15°	12260	13122	13896
20°	12133	13462	14792
25°	11972	13850	15931
30°	11765	14339	17011
35°	11511	14815	16863
40°	11238	15235	14756
45°	10946	14981	13266
50°	10554	13679	12060
55°	10120	12447	11017
60°	9625	11414	10092
65°	9042	10404	9215
70°	8272	9309	8236
75°	7286	7997	7146
80°	5993	6415	5784
85°	4220	4352	3936

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 14981 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.4	3.2
10°-20°	405.9	9.5
20°-30°	660.6	15.4
30°-40°	838.9	19.6
40°-50°	817.5	19.1
50°-60°	670.2	15.6
60°-70°	467.7	10.9
70°-80°	240.0	5.6
80°-90°	53.2	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°	1201.9	28.0
0°-40°	2040.9	47.6
0°-60°	3528.6	82.3
0°-90°	4289.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4289.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1411	1411	1411	1411	1411	
5°	1396	1417	1410	1420	1434	133
15°	1339	1381	1434	1490	1518	378
25°	1227	1306	1420	1567	1633	565
35°	1066	1170	1373	1572	1562	668
45°	875	983	1198	1098	1061	675
55°	656	758	808	740	715	587
65°	432	494	497	457	440	428
75°	213	237	234	218	209	227
85°	42	43	43	40	39	53
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1411.4	1411.4	1411.4	1411.4	1411.4
2.5°	1401.7	1419.7	1407.3	1412.8	1415.6
5°	1396.2	1417.0	1410.0	1419.7	1433.6
7.5°	1387.9	1411.4	1415.6	1435.0	1453.0
10°	1375.4	1403.1	1419.7	1453.0	1473.8
12.5°	1358.8	1393.4	1426.7	1472.4	1497.3
15°	1339.4	1381.0	1433.6	1490.4	1518.1
17.5°	1315.9	1365.7	1433.6	1504.2	1541.6
20°	1289.5	1347.7	1430.8	1522.2	1572.1
22.5°	1259.1	1328.3	1425.3	1543.0	1605.3
25°	1227.2	1306.2	1419.7	1566.6	1633.0
27.5°	1191.2	1279.8	1412.8	1584.6	1653.8
30°	1152.4	1248.0	1404.5	1592.9	1666.3
32.5°	1110.9	1210.6	1390.6	1592.9	1659.4
35°	1066.5	1170.4	1372.6	1572.1	1562.4
37.5°	1023.6	1127.5	1350.5	1471.0	1410.0
40°	973.7	1081.8	1320.0	1328.3	1278.5
42.5°	926.6	1033.3	1277.1	1207.8	1163.5
45°	875.4	983.4	1198.1	1098.4	1061.0
47.5°	822.8	929.4	1095.6	1000.0	965.4
50°	767.3	875.4	994.5	907.2	876.8
52.5°	713.3	817.2	897.5	821.4	792.3
55°	656.5	757.7	807.5	739.6	714.7
57.5°	599.8	696.7	725.8	663.5	639.9
60°	544.3	631.6	645.5	591.4	570.7
62.5°	488.9	563.7	569.3	522.2	504.2
65°	432.2	494.5	497.3	457.1	440.5
67.5°	376.7	428.0	428.0	393.4	379.5
70°	320.0	362.9	360.1	332.4	318.6
72.5°	265.9	296.4	293.6	272.9	263.2
75°	213.3	236.9	234.1	217.5	209.2
77.5°	163.4	180.1	177.3	166.2	159.3
80°	117.7	127.4	126.0	117.7	113.6
82.5°	77.6	83.1	80.3	74.8	72.0
85°	41.6	42.9	42.9	40.2	38.8
87.5°	15.2	15.2	15.2	15.2	13.9
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	20.45	22.05	20.82	22.37	22.68	20.24	21.84	20.60	22.15	22.47
	3H	21.96	23.40	22.33	23.72	24.08	21.71	23.15	22.09	23.48	23.84
	4H	22.46	23.81	22.86	24.16	24.54	22.21	23.56	22.60	23.91	24.28
	6H	22.78	24.03	23.19	24.40	24.79	22.52	23.77	22.93	24.14	24.53
	8H	22.86	24.06	23.29	24.45	24.85	22.60	23.79	23.02	24.18	24.58
	12H	22.90	24.05	23.33	24.43	24.86	22.63	23.78	23.06	24.16	24.59
4H	2H	21.08	22.43	21.47	22.78	23.15	20.91	22.26	21.31	22.61	22.98
	3H	22.81	23.93	23.22	24.33	24.73	22.57	23.70	22.98	24.10	24.50
	4H	23.43	24.45	23.87	24.86	25.30	23.17	24.19	23.60	24.60	25.04
	6H	23.86	24.75	24.32	25.19	25.64	23.58	24.47	24.04	24.91	25.37
	8H	23.97	24.80	24.44	25.24	25.71	23.69	24.51	24.15	24.96	25.42
	12H	24.04	24.78	24.52	25.26	25.73	23.75	24.49	24.23	24.96	25.43
8H	4H	23.68	24.50	24.14	24.95	25.41	23.44	24.27	23.90	24.71	25.18
	6H	24.20	24.88	24.69	25.37	25.85	23.94	24.63	24.44	25.12	25.59
	8H	24.36	24.98	24.87	25.49	25.97	24.09	24.71	24.60	25.21	25.70
	12H	24.47	25.02	24.98	25.51	26.07	24.19	24.73	24.70	25.23	25.79
12H	4H	23.69	24.43	24.17	24.91	25.37	23.46	24.20	23.94	24.68	25.15
	6H	24.22	24.84	24.73	25.34	25.83	23.97	24.59	24.48	25.10	25.58
	8H	24.43	24.97	24.94	25.46	26.03	24.17	24.71	24.67	25.20	25.76