

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: P1439946

Luminaire Tested: S124DR-S1005D935-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439946  
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-S1005D935-X4F0-XX-UDD-FLB-W  
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

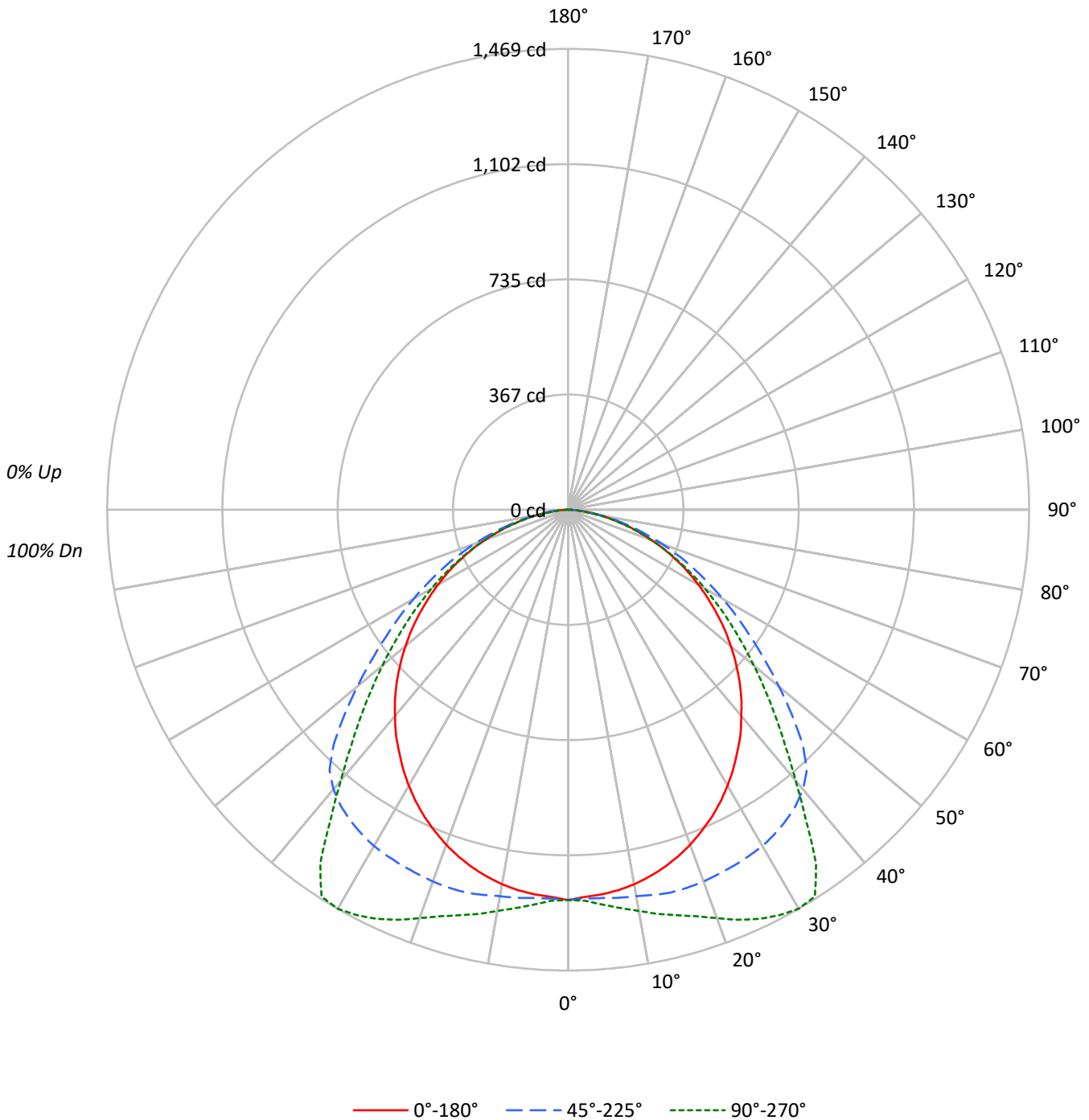
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3780.6 lumens  
Efficiency: N/A  
Efficacy: 90.2 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 (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°	10999	10999	10999
5°	10922	11030	11214
10°	10884	11234	11661
15°	10805	11565	12247
20°	10694	11865	13037
25°	10551	12207	14041
30°	10369	12638	14993
35°	10146	13058	14863
40°	9905	13427	13005
45°	9648	13204	11692
50°	9302	12056	10630
55°	8920	10970	9710
60°	8484	10060	8894
65°	7969	9169	8121
70°	7290	8205	7259
75°	6422	7047	6296
80°	5285	5657	5097
85°	3713	3835	3469

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 13204 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.4	3.2
10°-20°	357.7	9.5
20°-30°	582.3	15.4
30°-40°	739.4	19.6
40°-50°	720.5	19.1
50°-60°	590.7	15.6
60°-70°	412.2	10.9
70°-80°	211.5	5.6
80°-90°	46.9	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°	1059.3	28.0
0°-40°	1798.8	47.6
0°-60°	3110.0	82.3
0°-90°	3780.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3780.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1244	1244	1244	1244	1244	
5°	1231	1249	1243	1251	1264	117
15°	1180	1217	1264	1314	1338	333
25°	1082	1151	1251	1381	1439	498
35°	940	1032	1210	1386	1377	588
45°	772	867	1056	968	935	595
55°	579	668	712	652	630	517
65°	381	436	438	403	388	377
75°	188	209	206	192	184	200
85°	37	38	38	35	34	46
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1244.0	1244.0	1244.0	1244.0	1244.0
2.5°	1235.5	1251.3	1240.3	1245.2	1247.7
5°	1230.6	1248.9	1242.8	1251.3	1263.5
7.5°	1223.2	1244.0	1247.7	1264.8	1280.6
10°	1212.3	1236.7	1251.3	1280.6	1298.9
12.5°	1197.6	1228.1	1257.4	1297.7	1319.7
15°	1180.5	1217.1	1263.5	1313.6	1338.0
17.5°	1159.8	1203.7	1263.5	1325.8	1358.8
20°	1136.6	1187.8	1261.1	1341.7	1385.6
22.5°	1109.7	1170.8	1256.2	1360.0	1414.9
25°	1081.6	1151.2	1251.3	1380.7	1439.3
27.5°	1049.9	1128.0	1245.2	1396.6	1457.6
30°	1015.7	1099.9	1237.9	1403.9	1468.6
32.5°	979.1	1067.0	1225.7	1403.9	1462.5
35°	940.0	1031.6	1209.8	1385.6	1377.1
37.5°	902.2	993.7	1190.3	1296.5	1242.8
40°	858.2	953.5	1163.4	1170.8	1126.8
42.5°	816.7	910.7	1125.6	1064.5	1025.5
45°	771.6	866.8	1056.0	968.1	935.1
47.5°	725.2	819.2	965.7	881.4	850.9
50°	676.3	771.6	876.5	799.6	772.8
52.5°	628.7	720.3	791.1	723.9	698.3
55°	578.7	667.8	711.7	651.9	629.9
57.5°	528.6	614.1	639.7	584.8	564.0
60°	479.8	556.7	568.9	521.3	503.0
62.5°	430.9	496.9	501.8	460.2	444.4
65°	380.9	435.8	438.3	402.9	388.2
67.5°	332.1	377.2	377.2	346.7	334.5
70°	282.0	319.9	317.4	293.0	280.8
72.5°	234.4	261.3	258.8	240.5	232.0
75°	188.0	208.8	206.3	191.7	184.3
77.5°	144.1	158.7	156.3	146.5	140.4
80°	103.8	112.3	111.1	103.8	100.1
82.5°	68.4	73.2	70.8	65.9	63.5
85°	36.6	37.8	37.8	35.4	34.2
87.5°	13.4	13.4	13.4	13.4	12.2
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	20.02	21.61	20.38	21.93	22.24	19.80	21.40	20.16	21.71	22.03
	3H	21.52	22.96	21.90	23.28	23.65	21.27	22.71	21.65	23.04	23.40
	4H	22.02	23.37	22.42	23.72	24.10	21.77	23.12	22.17	23.47	23.84
	6H	22.34	23.59	22.75	23.96	24.35	22.08	23.34	22.49	23.70	24.09
	8H	22.42	23.62	22.85	24.01	24.41	22.16	23.35	22.58	23.74	24.14
	12H	22.46	23.61	22.89	23.99	24.42	22.19	23.34	22.62	23.72	24.15
4H	2H	20.64	21.99	21.04	22.34	22.71	20.47	21.82	20.87	22.17	22.55
	3H	22.37	23.49	22.78	23.89	24.29	22.13	23.26	22.54	23.66	24.06
	4H	23.00	24.01	23.43	24.43	24.86	22.73	23.75	23.16	24.16	24.60
	6H	23.42	24.31	23.88	24.75	25.21	23.15	24.03	23.60	24.47	24.93
	8H	23.54	24.36	24.00	24.81	25.27	23.25	24.08	23.71	24.52	24.98
	12H	23.60	24.34	24.08	24.82	25.29	23.31	24.05	23.79	24.53	25.00
8H	4H	23.24	24.06	23.70	24.51	24.97	23.00	23.83	23.47	24.28	24.74
	6H	23.76	24.45	24.25	24.94	25.41	23.51	24.19	24.00	24.68	25.16
	8H	23.93	24.54	24.44	25.05	25.53	23.65	24.27	24.16	24.78	25.26
	12H	24.03	24.58	24.54	25.07	25.63	23.75	24.30	24.26	24.79	25.35
12H	4H	23.25	23.99	23.73	24.47	24.94	23.02	23.76	23.50	24.24	24.71
	6H	23.78	24.40	24.29	24.91	25.39	23.53	24.15	24.05	24.66	25.15
	8H	23.99	24.54	24.50	25.03	25.59	23.73	24.27	24.24	24.76	25.32