

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: P1439896

Luminaire Tested: S124DR-H1005D835-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439896  
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-H1005D835-X4F0-XX-UDD-FLB-W  
Description: DEFINE 4, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

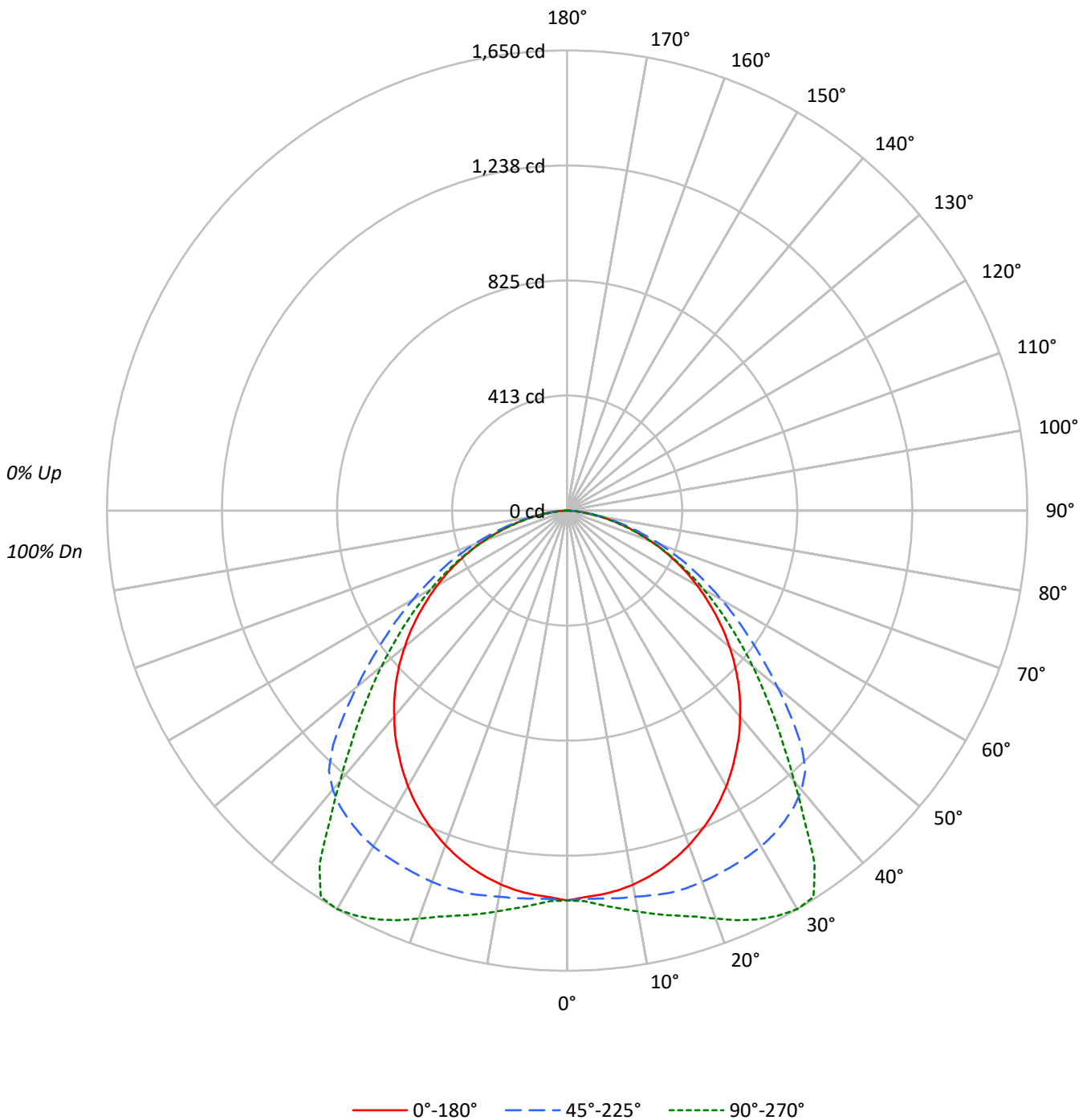
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4247.5 lumens  
Efficiency: N/A  
Efficacy: 116.1 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 (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°	12357	12357	12357
5°	12270	12392	12599
10°	12228	12622	13102
15°	12140	12994	13759
20°	12014	13330	14647
25°	11855	13715	15775
30°	11651	14199	16845
35°	11399	14670	16698
40°	11128	15086	14612
45°	10838	14834	13136
50°	10452	13546	11942
55°	10021	12325	10909
60°	9531	11303	9993
65°	8952	10301	9126
70°	8189	9218	8156
75°	7215	7918	7075
80°	5937	6354	5728
85°	4169	4311	3895

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 14834 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.1	3.2
10°-20°	401.9	9.5
20°-30°	654.2	15.4
30°-40°	830.7	19.6
40°-50°	809.5	19.1
50°-60°	663.7	15.6
60°-70°	463.1	10.9
70°-80°	237.7	5.6
80°-90°	52.7	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°	1190.2	28.0
0°-40°	2020.9	47.6
0°-60°	3494.1	82.3
0°-90°	4247.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4247.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1398	1398	1398	1398	1398	
5°	1382	1403	1396	1406	1420	131
15°	1326	1368	1420	1476	1503	374
25°	1215	1293	1406	1551	1617	559
35°	1056	1159	1359	1557	1547	661
45°	867	974	1186	1088	1051	668
55°	650	750	800	732	708	581
65°	428	490	492	453	436	424
75°	211	234	232	215	207	225
85°	41	42	42	40	38	52
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1397.6	1397.6	1397.6	1397.6	1397.6
2.5°	1388.0	1405.9	1393.5	1399.0	1401.8
5°	1382.5	1403.1	1396.3	1405.9	1419.6
7.5°	1374.3	1397.6	1401.8	1421.0	1438.8
10°	1362.0	1389.4	1405.9	1438.8	1459.4
12.5°	1345.5	1379.8	1412.7	1458.0	1482.7
15°	1326.3	1367.5	1419.6	1475.8	1503.2
17.5°	1303.0	1352.4	1419.6	1489.5	1526.6
20°	1276.9	1334.5	1416.8	1507.4	1556.7
22.5°	1246.8	1315.3	1411.4	1527.9	1589.7
25°	1215.2	1293.4	1405.9	1551.3	1617.1
27.5°	1179.6	1267.3	1399.0	1569.1	1637.7
30°	1141.2	1235.8	1390.8	1577.3	1650.0
32.5°	1100.0	1198.8	1377.1	1577.3	1643.1
35°	1056.1	1159.0	1359.2	1556.7	1547.1
37.5°	1013.6	1116.5	1337.3	1456.6	1396.3
40°	964.2	1071.2	1307.1	1315.3	1266.0
42.5°	917.6	1023.2	1264.6	1196.0	1152.1
45°	866.8	973.8	1186.4	1087.7	1050.6
47.5°	814.7	920.3	1084.9	990.3	956.0
50°	759.9	866.8	984.8	898.4	868.2
52.5°	706.4	809.2	888.8	813.3	784.5
55°	650.1	750.3	799.6	732.4	707.7
57.5°	593.9	689.9	718.7	657.0	633.7
60°	539.0	625.4	639.2	585.7	565.1
62.5°	484.2	558.2	563.7	517.1	499.3
65°	427.9	489.7	492.4	452.6	436.2
67.5°	373.1	423.8	423.8	389.5	375.8
70°	316.8	359.4	356.6	329.2	315.5
72.5°	263.3	293.5	290.8	270.2	260.6
75°	211.2	234.5	231.8	215.3	207.1
77.5°	161.8	178.3	175.6	164.6	157.7
80°	116.6	126.2	124.8	116.6	112.5
82.5°	76.8	82.3	79.6	74.1	71.3
85°	41.1	42.5	42.5	39.8	38.4
87.5°	15.1	15.1	15.1	15.1	13.7
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	20.42	22.02	20.78	22.33	22.65	20.20	21.80	20.57	22.12	22.43
	3H	21.92	23.36	22.30	23.69	24.05	21.67	23.11	22.05	23.44	23.80
	4H	22.43	23.78	22.82	24.13	24.50	22.17	23.52	22.57	23.87	24.25
	6H	22.75	24.00	23.16	24.36	24.75	22.49	23.74	22.90	24.10	24.50
	8H	22.83	24.02	23.25	24.41	24.81	22.56	23.76	22.99	24.15	24.55
	12H	22.87	24.01	23.30	24.39	24.82	22.60	23.74	23.03	24.12	24.55
4H	2H	21.04	22.39	21.44	22.74	23.12	20.87	22.23	21.27	22.57	22.95
	3H	22.77	23.90	23.18	24.30	24.70	22.54	23.67	22.95	24.07	24.47
	4H	23.40	24.42	23.83	24.83	25.27	23.14	24.15	23.57	24.57	25.00
	6H	23.83	24.71	24.28	25.15	25.61	23.55	24.43	24.00	24.88	25.33
	8H	23.94	24.77	24.40	25.21	25.68	23.65	24.48	24.11	24.92	25.39
	12H	24.00	24.75	24.48	25.22	25.69	23.71	24.45	24.19	24.93	25.40
8H	4H	23.64	24.47	24.10	24.91	25.38	23.41	24.24	23.87	24.68	25.15
	6H	24.16	24.85	24.66	25.34	25.82	23.91	24.60	24.40	25.08	25.56
	8H	24.33	24.94	24.84	25.45	25.94	24.06	24.67	24.57	25.18	25.67
	12H	24.44	24.98	24.95	25.47	26.04	24.16	24.70	24.66	25.19	25.75
12H	4H	23.65	24.39	24.13	24.87	25.34	23.43	24.17	23.91	24.65	25.12
	6H	24.19	24.80	24.70	25.31	25.80	23.94	24.56	24.45	25.06	25.55
	8H	24.40	24.94	24.90	25.43	25.99	24.13	24.68	24.64	25.17	25.73