

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: P1055983

Luminaire Tested: S124R3DR-S1195D835-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055983  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S124R3DR-S1195D835-X4F0-XX-UDD-F-B  
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

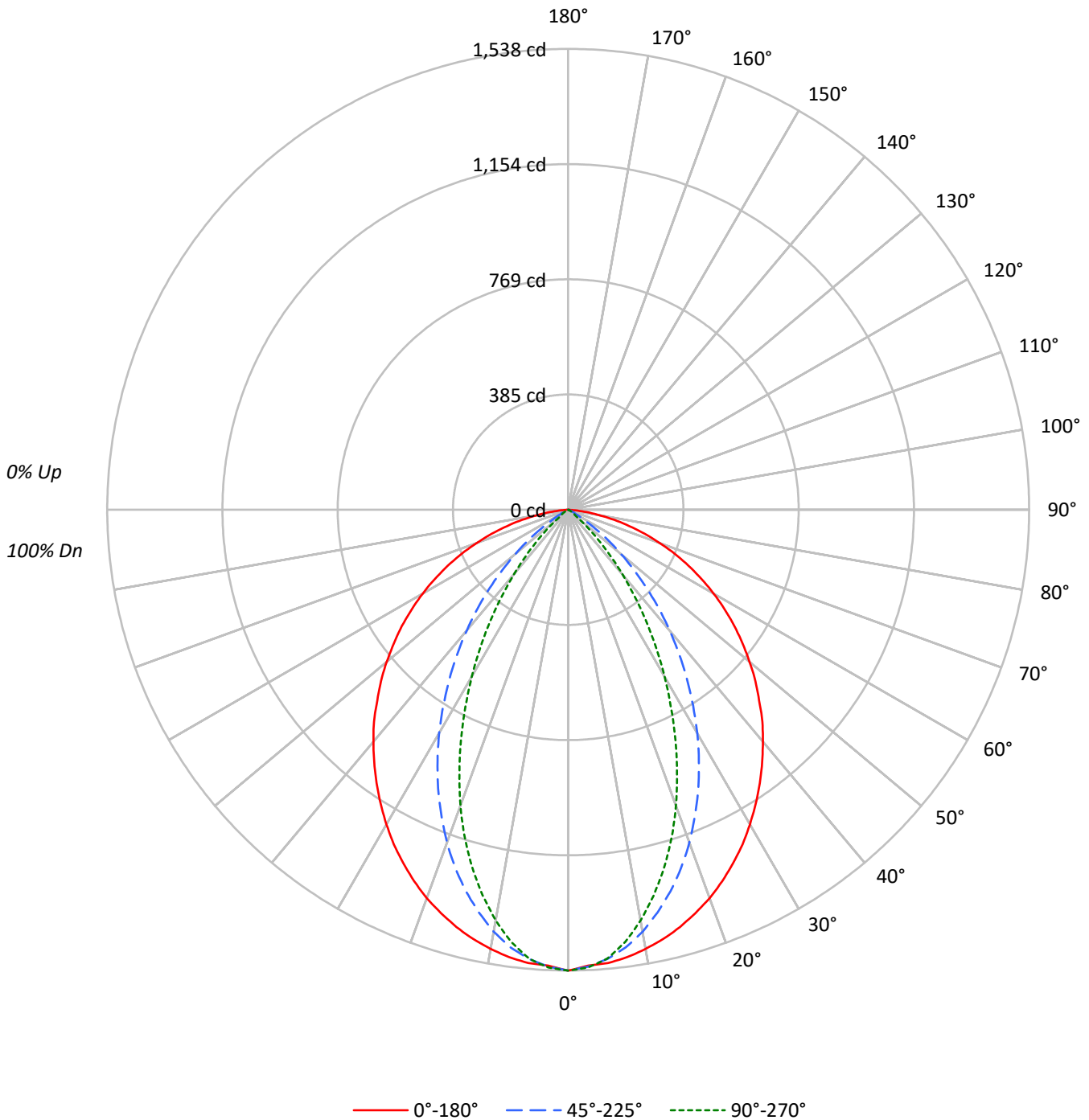
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2150.0 lumens  
Efficiency: N/A  
Efficacy: 51.3 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97  
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	112	108	105	102	109	106	103	100	102	99	97	98	96	94	95	93	92	90
2	104	98	93	88	102	96	91	87	93	89	85	90	86	83	87	84	82	80
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	65	64
5	84	74	66	61	83	73	66	61	71	65	60	69	64	60	67	63	59	57
6	79	68	60	55	77	67	60	55	65	59	54	64	58	54	62	57	54	52
7	74	63	55	50	73	62	55	50	60	54	50	59	53	49	58	53	49	47
8	70	58	51	46	68	57	50	46	56	50	45	55	49	45	54	49	45	43
9	66	54	47	42	64	53	47	42	52	46	42	51	46	42	50	45	41	40
10	62	50	43	39	61	50	43	39	49	43	39	48	42	39	47	42	38	37

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	13601	13601	13601
5°	13479	13358	13345
10°	13363	12836	12497
15°	13197	12065	11320
20°	12984	11125	9891
25°	12697	10020	8254
30°	12380	8792	6559
35°	12029	7455	4883
40°	11663	6074	3255
45°	11258	4639	1792
50°	10870	3173	498
55°	10439	1720	325
60°	9920	534	187
65°	9276	347	94
70°	8383	155	39
75°	7211	51	0
80°	5453	0	0
85°	2293	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 11258 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.9	6.6
10°-20°	372.6	17.3
20°-30°	481.4	22.4
30°-40°	460.1	21.4
40°-50°	344.1	16.0
50°-60°	204.8	9.5
60°-70°	104.0	4.8
70°-80°	36.1	1.7
80°-90°	4.9	0.2
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°	995.9	46.3
0°-40°	1456.1	67.7
0°-60°	2005.0	93.3
0°-90°	2150.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2150.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1538	1538	1538	1538	1538	
5°	1519	1531	1505	1498	1504	144
15°	1442	1412	1318	1256	1237	406
25°	1302	1211	1027	891	846	599
35°	1114	961	691	514	452	697
45°	900	691	371	198	143	696
55°	677	421	112	26	21	605
65°	443	170	17	6	4	438
75°	211	23	2	2	0	224
85°	23	0	0	0	0	37
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1538.3	1538.3	1538.3	1538.3	1538.3
2.5°	1523.2	1541.3	1526.3	1527.8	1529.3
5°	1518.7	1530.8	1505.1	1497.6	1503.6
7.5°	1506.6	1511.2	1473.5	1453.9	1455.4
10°	1488.5	1484.0	1429.7	1396.5	1392.0
12.5°	1467.4	1452.4	1376.9	1328.7	1318.1
15°	1441.8	1411.6	1318.1	1256.3	1236.7
17.5°	1411.6	1367.9	1253.3	1171.8	1147.7
20°	1380.0	1319.6	1182.4	1081.3	1051.2
22.5°	1342.3	1265.3	1105.5	986.3	948.6
25°	1301.5	1211.0	1027.1	891.3	846.1
27.5°	1259.3	1152.2	944.1	794.8	742.0
30°	1212.6	1090.4	861.2	696.8	642.5
32.5°	1164.3	1027.1	775.2	606.3	546.0
35°	1114.5	960.7	690.7	514.3	452.4
37.5°	1063.2	894.3	609.3	426.8	363.5
40°	1010.5	826.5	526.3	343.9	282.0
42.5°	959.2	758.6	447.9	265.4	208.1
45°	900.4	690.7	371.0	197.6	143.3
47.5°	847.6	624.4	297.1	134.2	84.5
50°	790.3	553.5	230.7	78.4	36.2
52.5°	733.0	487.1	168.9	34.7	27.1
55°	677.2	420.8	111.6	25.6	21.1
57.5°	618.3	354.4	60.3	19.6	15.1
60°	561.0	289.6	30.2	15.1	10.6
62.5°	502.2	227.7	24.1	9.0	6.0
65°	443.4	170.4	16.6	6.0	4.5
67.5°	384.6	116.1	10.6	3.0	1.5
70°	324.3	70.9	6.0	1.5	1.5
72.5°	266.9	36.2	3.0	1.5	1.5
75°	211.1	22.6	1.5	1.5	0.0
77.5°	156.8	12.1	1.5	1.5	0.0
80°	107.1	4.5	0.0	0.0	0.0
82.5°	61.8	1.5	0.0	0.0	0.0
85°	22.6	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	19.52	20.85	19.89	21.16	21.48	0.00	0.00	0.00	0.00	0.15
	3H	21.07	22.24	21.45	22.57	22.94	0.00	0.00	0.00	0.00	0.00
	4H	21.66	22.76	22.06	23.11	23.49	0.00	0.00	0.00	0.00	0.00
	6H	22.08	23.08	22.49	23.45	23.85	0.00	0.00	0.00	0.00	0.00
	8H	22.18	23.13	22.61	23.52	23.92	0.00	0.00	0.00	0.00	0.00
	12H	22.19	23.10	22.63	23.49	23.92	0.00	0.00	0.00	0.00	0.00
4H	2H	19.30	20.40	19.70	20.75	21.13	0.00	0.27	0.00	0.62	1.00
	3H	20.86	21.76	21.28	22.16	22.57	0.00	0.03	0.00	0.44	0.84
	4H	21.45	22.25	21.88	22.66	23.11	0.00	0.00	0.00	0.30	0.74
	6H	21.91	22.59	22.37	23.04	23.51	0.00	0.00	0.00	0.15	0.62
	8H	22.03	22.67	22.50	23.12	23.59	0.00	0.00	0.00	0.05	0.52
	12H	22.07	22.63	22.55	23.12	23.59	0.00	0.00	0.00	0.00	0.44
8H	4H	21.31	21.95	21.78	22.40	22.87	0.82	1.46	1.29	1.91	2.38
	6H	21.75	22.27	22.25	22.77	23.25	0.73	1.25	1.23	1.75	2.23
	8H	21.87	22.34	22.39	22.85	23.34	0.67	1.13	1.19	1.65	2.14
	12H	21.92	22.33	22.43	22.83	23.40	0.62	1.03	1.14	1.53	2.10
12H	4H	21.27	21.83	21.75	22.31	22.79	1.23	1.80	1.72	2.28	2.75
	6H	21.69	22.16	22.21	22.67	23.17	1.12	1.59	1.65	2.11	2.60
	8H	21.83	22.24	22.34	22.73	23.30	1.08	1.49	1.59	1.99	2.56