

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: P1056061

Luminaire Tested: S124R3DR-S795D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1056061
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-S795D830-X4F0-XX-UDD-F-B
Description: DEFINE 4, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

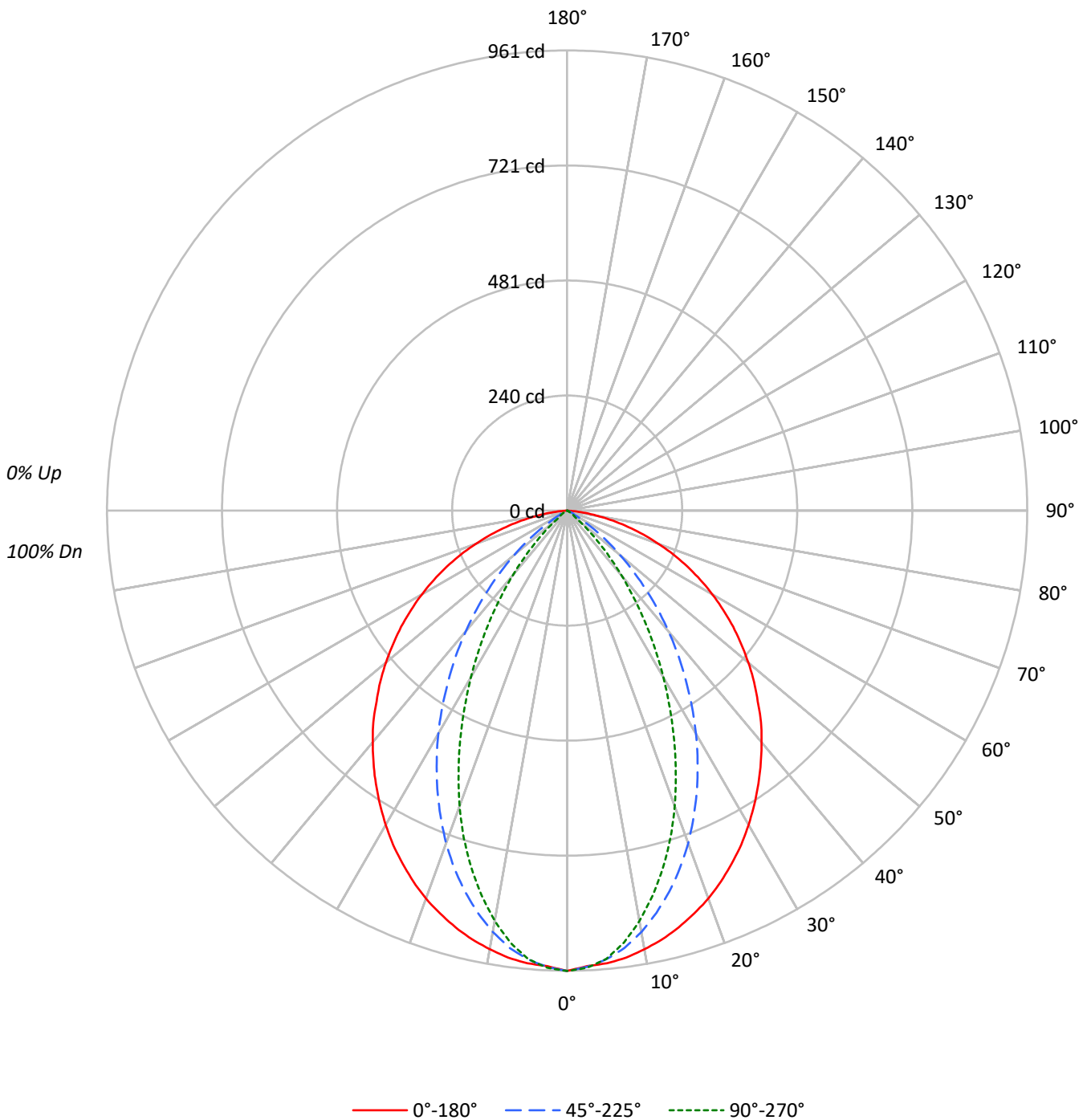
Lumens per Lamp: N/A
Luminaire Lumens: 1343.7 lumens
Efficiency: N/A
Efficacy: 50.9 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 0.81 / 0.97
Luminous Opening: Rectangular (W 0.31' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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	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°	8500	8500	8500
5°	8423	8349	8340
10°	8352	8022	7811
15°	8248	7540	7075
20°	8114	6953	6182
25°	7935	6262	5159
30°	7736	5495	4099
35°	7518	4659	3052
40°	7289	3796	2035
45°	7036	2900	1119
50°	6793	1983	311
55°	6523	1074	203
60°	6200	334	117
65°	5797	218	59
70°	5237	98	23
75°	4509	31	0
80°	3406	0	0
85°	1430	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7036 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	88.7	6.6
10°-20°	232.8	17.3
20°-30°	300.9	22.4
30°-40°	287.6	21.4
40°-50°	215.1	16.0
50°-60°	128.0	9.5
60°-70°	65.0	4.8
70°-80°	22.6	1.7
80°-90°	3.1	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°	622.4	46.3
0°-40°	910.0	67.7
0°-60°	1253.1	93.3
0°-90°	1343.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1343.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	961	961	961	961	961	
5°	949	957	941	936	940	90
15°	901	882	824	785	773	254
25°	813	757	642	557	529	375
35°	696	600	432	321	283	436
45°	563	432	232	124	90	435
55°	423	263	70	16	13	378
65°	277	106	10	4	3	274
75°	132	14	1	1	0	140
85°	14	0	0	0	0	23
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	961.4	961.4	961.4	961.4	961.4
2.5°	952.0	963.3	953.9	954.8	955.7
5°	949.1	956.7	940.7	935.9	939.7
7.5°	941.6	944.4	920.9	908.6	909.6
10°	930.3	927.5	893.5	872.8	870.0
12.5°	917.1	907.7	860.5	830.4	823.8
15°	901.1	882.2	823.8	785.1	772.9
17.5°	882.2	854.9	783.3	732.4	717.3
20°	862.4	824.7	739.0	675.8	657.0
22.5°	838.9	790.8	690.9	616.4	592.9
25°	813.4	756.9	641.9	557.0	528.8
27.5°	787.0	720.1	590.0	496.7	463.7
30°	757.8	681.5	538.2	435.5	401.5
32.5°	727.6	641.9	484.5	378.9	341.2
35°	696.5	600.4	431.7	321.4	282.8
37.5°	664.5	558.9	380.8	266.7	227.2
40°	631.5	516.5	328.9	214.9	176.3
42.5°	599.5	474.1	279.9	165.9	130.1
45°	562.7	431.7	231.9	123.5	89.5
47.5°	529.7	390.2	185.7	83.9	52.8
50°	493.9	345.9	144.2	49.0	22.6
52.5°	458.1	304.4	105.6	21.7	17.0
55°	423.2	263.0	69.7	16.0	13.2
57.5°	386.4	221.5	37.7	12.3	9.4
60°	350.6	181.0	18.9	9.4	6.6
62.5°	313.9	142.3	15.1	5.7	3.8
65°	277.1	106.5	10.4	3.8	2.8
67.5°	240.3	72.6	6.6	1.9	0.9
70°	202.6	44.3	3.8	0.9	0.9
72.5°	166.8	22.6	1.9	0.9	0.9
75°	132.0	14.1	0.9	0.9	0.0
77.5°	98.0	7.5	0.9	0.9	0.0
80°	66.9	2.8	0.0	0.0	0.0
82.5°	38.6	0.9	0.0	0.0	0.0
85°	14.1	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	17.89	19.22	18.26	19.53	19.85	0.00	0.00	0.00	0.00	0.00
	3H	19.43	20.61	19.81	20.94	21.30	0.00	0.00	0.00	0.00	0.00
	4H	20.03	21.12	20.43	21.47	21.86	0.00	0.00	0.00	0.00	0.00
	6H	20.44	21.45	20.86	21.82	22.21	0.00	0.00	0.00	0.00	0.00
	8H	20.54	21.49	20.97	21.89	22.29	0.00	0.00	0.00	0.00	0.00
	12H	20.56	21.47	20.99	21.85	22.28	0.00	0.00	0.00	0.00	0.00
4H	2H	17.67	18.76	18.07	19.11	19.50	0.00	0.00	0.00	0.00	0.00
	3H	19.23	20.13	19.64	20.53	20.93	0.00	0.00	0.00	0.00	0.00
	4H	19.81	20.61	20.25	21.03	21.47	0.00	0.00	0.00	0.00	0.00
	6H	20.27	20.96	20.74	21.41	21.87	0.00	0.00	0.00	0.00	0.00
	8H	20.39	21.03	20.86	21.48	21.95	0.00	0.00	0.00	0.00	0.00
	12H	20.43	21.00	20.92	21.48	21.96	0.00	0.00	0.00	0.00	0.00
8H	4H	19.68	20.32	20.15	20.77	21.24	0.00	0.00	0.00	0.28	0.75
	6H	20.12	20.64	20.62	21.14	21.62	0.00	0.00	0.00	0.12	0.60
	8H	20.24	20.70	20.76	21.22	21.71	0.00	0.00	0.00	0.02	0.51
	12H	20.28	20.70	20.80	21.19	21.76	0.00	0.00	0.00	0.00	0.47
12H	4H	19.63	20.20	20.12	20.68	21.16	0.00	0.16	0.09	0.65	1.12
	6H	20.06	20.53	20.58	21.04	21.53	0.00	0.00	0.01	0.47	0.97
	8H	20.19	20.60	20.71	21.10	21.67	0.00	0.00	0.00	0.36	0.93