

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: P1055602

Luminaire Tested: S123R3DRP-S340D830-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055602
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-5)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DRP-S340D830-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

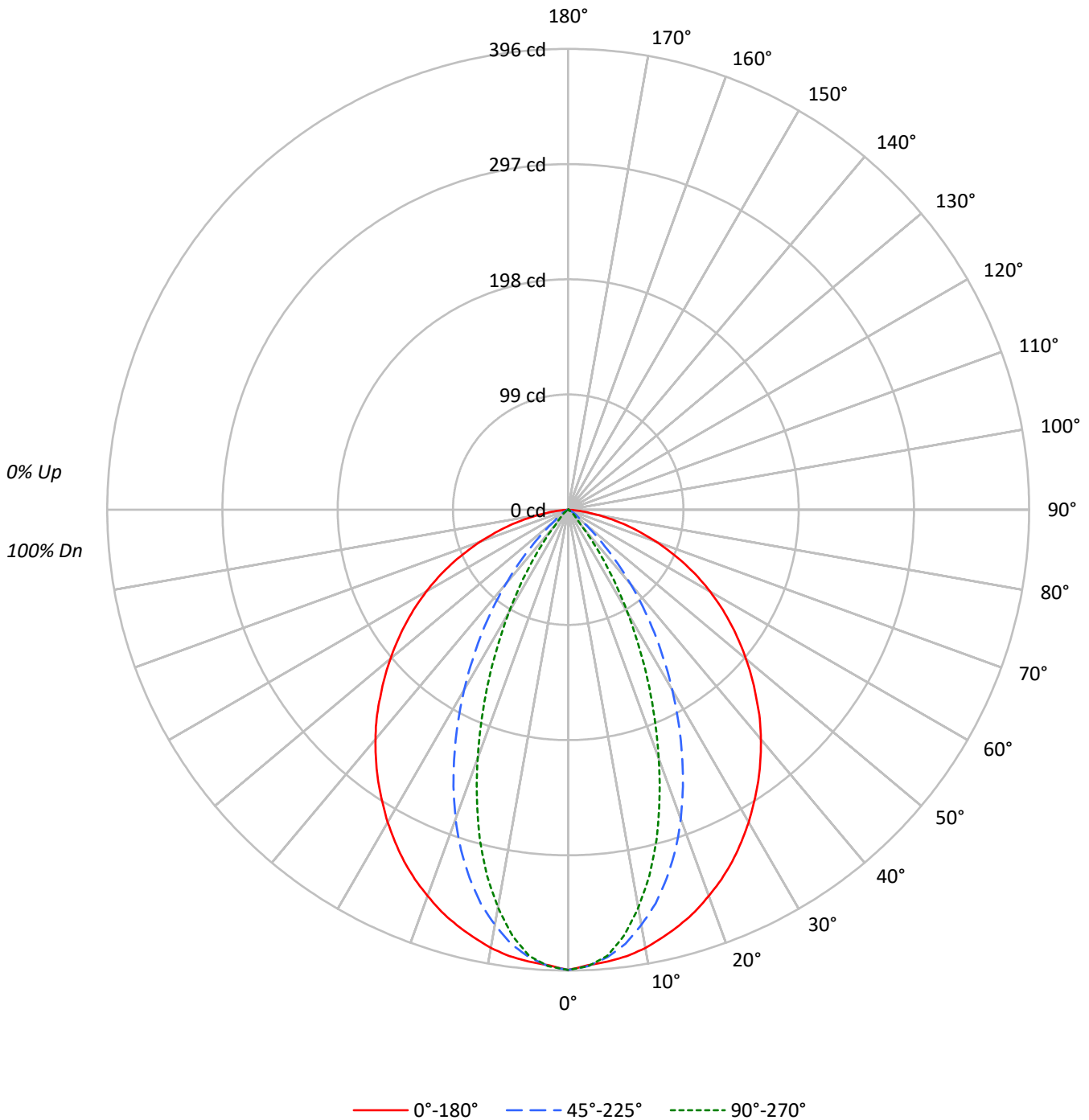
Lumens per Lamp: N/A
Luminaire Lumens: 462.8 lumens
Efficiency: N/A
Efficacy: 36.7 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
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	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	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90					90			
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81					81			
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73					73			
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65					65			
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59					59			
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56	54					54			
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50					50			
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46					46			
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43					43			
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40					40			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4768	4768	4768
5°	4716	4672	4657
10°	4681	4434	4249
15°	4613	4087	3661
20°	4532	3627	2916
25°	4436	3073	2150
30°	4317	2491	1410
35°	4190	1896	773
40°	4054	1311	264
45°	3896	762	153
50°	3740	300	92
55°	3580	189	44
60°	3393	118	19
65°	3161	60	11
70°	2834	28	14
75°	2408	19	19
80°	1791	28	0
85°	678	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3896 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	36.3	7.8
10°-20°	92.0	19.9
20°-30°	109.8	23.7
30°-40°	93.1	20.1
40°-50°	63.3	13.7
50°-60°	39.2	8.5
60°-70°	19.9	4.3
70°-80°	8.1	1.7
80°-90°	1.2	0.3
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°	238.0	51.4
0°-40°	331.1	71.5
0°-60°	433.6	93.7
0°-90°	462.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	462.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	396	396	396	396	396	
5°	390	393	386	383	385	37
15°	370	360	327	302	293	104
25°	334	302	231	178	162	153
35°	285	228	129	69	52	178
45°	228	150	45	11	9	176
55°	170	76	9	3	2	152
65°	111	18	2	0	0	109
75°	52	3	0	0	0	55
85°	5	0	0	0	0	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	395.5	395.5	395.5	395.5	395.5
2.5°	391.8	397.1	392.6	392.2	392.6
5°	389.7	393.4	386.0	383.2	384.8
7.5°	386.9	388.5	376.2	368.8	368.8
10°	382.4	381.1	362.2	349.9	347.1
12.5°	376.2	371.3	346.7	327.4	322.0
15°	369.6	360.2	327.4	301.5	293.3
17.5°	362.2	347.9	306.5	272.8	260.9
20°	353.2	333.9	282.7	241.6	227.3
22.5°	343.8	318.8	257.6	209.6	193.6
25°	333.5	302.4	231.0	178.5	161.6
27.5°	322.0	285.1	204.7	148.5	130.0
30°	310.1	267.1	178.9	119.8	101.3
32.5°	297.4	248.2	153.0	93.5	76.3
35°	284.7	228.5	128.8	69.3	52.5
37.5°	271.2	208.8	105.4	48.0	33.2
40°	257.6	189.5	83.3	30.4	16.8
42.5°	243.7	169.4	63.2	15.2	11.5
45°	228.5	149.7	44.7	11.1	9.0
47.5°	214.1	130.9	29.5	9.0	7.0
50°	199.4	112.0	16.0	6.6	4.9
52.5°	184.6	93.9	11.5	4.9	3.3
55°	170.3	75.5	9.0	3.3	2.1
57.5°	155.5	59.5	7.0	2.1	1.2
60°	140.7	43.9	4.9	1.2	0.8
62.5°	125.9	30.4	3.3	0.8	0.4
65°	110.8	18.5	2.1	0.4	0.4
67.5°	95.2	12.7	1.2	0.4	0.4
70°	80.4	9.0	0.8	0.4	0.4
72.5°	65.6	5.7	0.4	0.4	0.0
75°	51.7	3.3	0.4	0.4	0.4
77.5°	38.2	1.2	0.4	0.4	0.0
80°	25.8	0.4	0.4	0.4	0.0
82.5°	14.4	0.0	0.4	0.4	0.0
85°	4.9	0.0	0.0	0.4	0.0
87.5°	0.0	0.0	0.0	0.4	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	14.48	15.76	14.84	16.07	16.38	0.00	0.00	0.00	0.00	0.00
	3H	16.42	17.55	16.80	17.88	18.25	0.00	0.00	0.00	0.00	0.00
	4H	17.25	18.30	17.65	18.65	19.04	0.00	0.00	0.00	0.00	0.00
	6H	17.80	18.77	18.22	19.14	19.54	0.00	0.00	0.00	0.00	0.00
	8H	17.93	18.84	18.36	19.24	19.64	0.00	0.00	0.00	0.00	0.00
	12H	17.95	18.83	18.38	19.21	19.64	0.00	0.00	0.00	0.00	0.00
4H	2H	14.24	15.30	14.64	15.65	16.03	0.00	0.00	0.00	0.00	0.00
	3H	16.19	17.05	16.60	17.46	17.86	0.00	0.00	0.00	0.00	0.00
	4H	17.00	17.77	17.44	18.19	18.64	0.00	0.00	0.00	0.00	0.00
	6H	17.61	18.27	18.07	18.72	19.18	0.00	0.00	0.00	0.00	0.00
	8H	17.76	18.38	18.23	18.82	19.30	0.00	0.00	0.00	0.00	0.00
	12H	17.81	18.35	18.29	18.83	19.31	0.00	0.00	0.00	0.00	0.00
8H	4H	16.86	17.48	17.33	17.93	18.40	0.00	0.00	0.00	0.00	0.00
	6H	17.44	17.95	17.95	18.44	18.93	0.00	0.00	0.00	0.00	0.00
	8H	17.59	18.04	18.12	18.56	19.05	0.00	0.00	0.00	0.00	0.00
	12H	17.65	18.05	18.17	18.54	19.12	0.00	0.00	0.00	0.00	0.00
12H	4H	16.81	17.36	17.30	17.84	18.32	0.00	0.00	0.00	0.00	0.00
	6H	17.38	17.83	17.90	18.35	18.84	0.00	0.00	0.00	0.00	0.00
	8H	17.55	17.94	18.07	18.44	19.01	0.00	0.00	0.00	0.00	0.00