

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: P1055617

Luminaire Tested: S123R3DR-S340D930-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055617
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: S123R3DR-S340D930-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, 90 CRI LEDS
Ballast/Driver: -

Summary

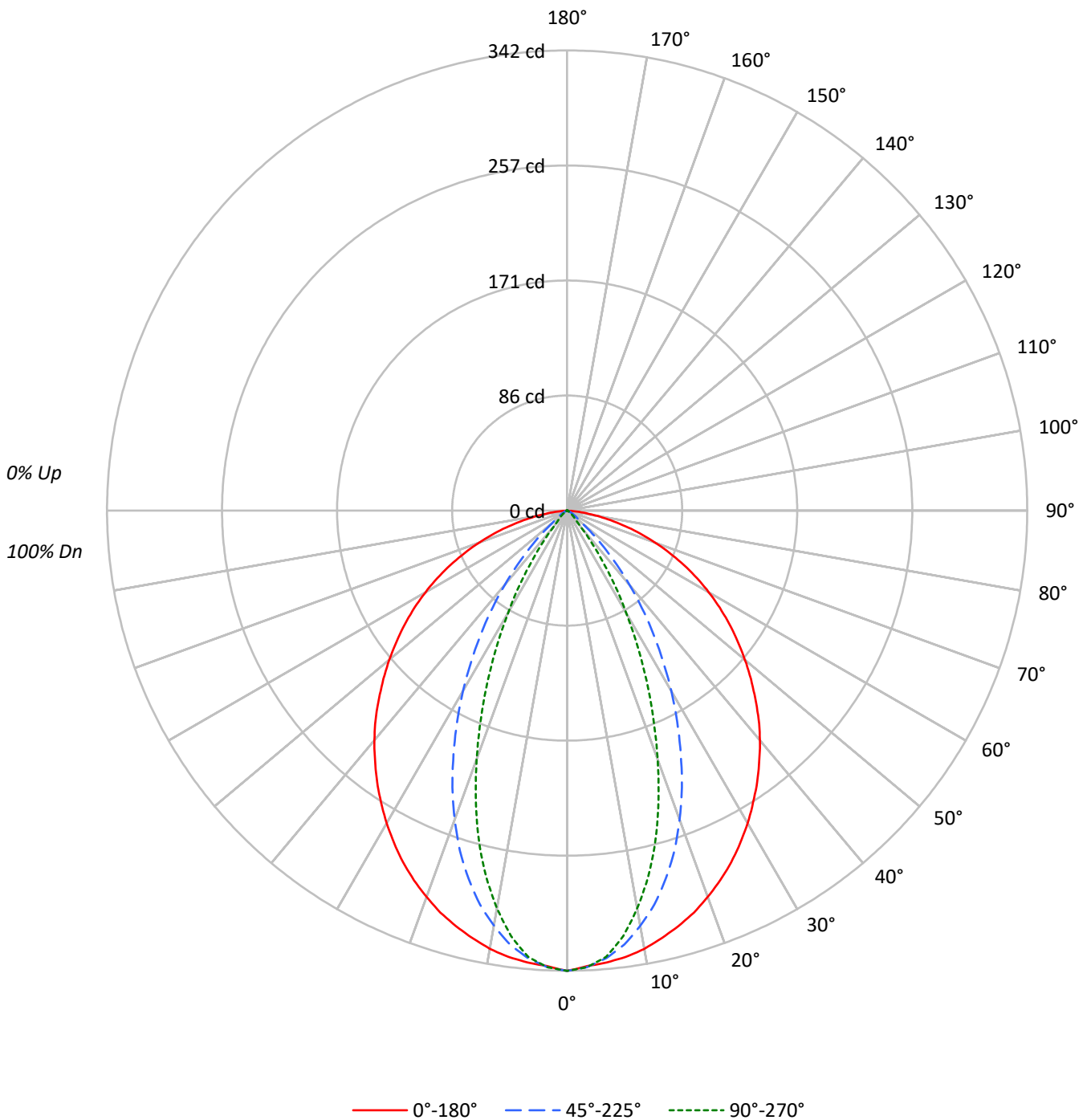
Lumens per Lamp: N/A
Luminaire Lumens: 400.5 lumens
Efficiency: N/A
Efficacy: 31.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (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	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	57	79	69	62	57	67	61	57	66	60	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°	4124	4124	4124
5°	4080	4041	4029
10°	4049	3836	3675
15°	3990	3535	3167
20°	3920	3137	2522
25°	3838	2658	1860
30°	3735	2154	1221
35°	3625	1640	668
40°	3508	1133	228
45°	3371	660	133
50°	3235	259	81
55°	3096	164	38
60°	2935	104	17
65°	2733	51	11
70°	2453	25	14
75°	2082	19	19
80°	1555	28	0
85°	595	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3371 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	31.4	7.8
10°-20°	79.6	19.9
20°-30°	94.9	23.7
30°-40°	80.5	20.1
40°-50°	54.7	13.7
50°-60°	33.9	8.5
60°-70°	17.2	4.3
70°-80°	7.0	1.8
80°-90°	1.1	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°	205.9	51.4
0°-40°	286.4	71.5
0°-60°	375.1	93.7
0°-90°	400.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	400.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	342	342	342	342	342	
5°	337	340	334	331	333	32
15°	320	312	283	261	254	90
25°	288	262	200	154	140	133
35°	246	198	111	60	45	154
45°	198	130	39	10	8	153
55°	147	65	8	3	2	132
65°	96	16	2	0	0	95
75°	45	3	0	0	0	48
85°	4	0	0	0	0	8
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	342.1	342.1	342.1	342.1	342.1
2.5°	338.9	343.5	339.6	339.3	339.6
5°	337.1	340.3	333.9	331.4	332.9
7.5°	334.6	336.1	325.4	319.0	319.0
10°	330.7	329.7	313.3	302.7	300.2
12.5°	325.4	321.2	299.9	283.2	278.6
15°	319.7	311.6	283.2	260.8	253.7
17.5°	313.3	300.9	265.1	236.0	225.7
20°	305.5	288.9	244.5	209.0	196.6
22.5°	297.4	275.7	222.9	181.3	167.5
25°	288.5	261.5	199.8	154.4	139.8
27.5°	278.6	246.6	177.1	128.5	112.5
30°	268.3	231.0	154.7	103.6	87.7
32.5°	257.3	214.7	132.4	80.9	66.0
35°	246.3	197.7	111.4	60.0	45.4
37.5°	234.6	180.6	91.2	41.5	28.7
40°	222.9	163.9	72.0	26.3	14.5
42.5°	210.8	146.6	54.6	13.1	9.9
45°	197.7	129.5	38.7	9.6	7.8
47.5°	185.2	113.2	25.6	7.8	6.0
50°	172.5	96.9	13.8	5.7	4.3
52.5°	159.7	81.3	9.9	4.3	2.8
55°	147.3	65.3	7.8	2.8	1.8
57.5°	134.5	51.5	6.0	1.8	1.1
60°	121.7	38.0	4.3	1.1	0.7
62.5°	108.9	26.3	2.8	0.7	0.4
65°	95.8	16.0	1.8	0.4	0.4
67.5°	82.3	11.0	1.1	0.4	0.4
70°	69.6	7.8	0.7	0.4	0.4
72.5°	56.8	5.0	0.4	0.4	0.0
75°	44.7	2.8	0.4	0.4	0.4
77.5°	33.0	1.1	0.4	0.4	0.0
80°	22.4	0.4	0.4	0.4	0.0
82.5°	12.4	0.0	0.4	0.4	0.0
85°	4.3	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	13.97	15.25	14.34	15.57	15.88	0.00	0.00	0.00	0.00	0.00
	3H	15.92	17.05	16.30	17.38	17.75	0.00	0.00	0.00	0.00	0.00
	4H	16.74	17.80	17.15	18.15	18.53	0.00	0.00	0.00	0.00	0.00
	6H	17.30	18.27	17.71	18.64	19.03	0.00	0.00	0.00	0.00	0.00
	8H	17.42	18.34	17.85	18.73	19.14	0.00	0.00	0.00	0.00	0.00
	12H	17.45	18.32	17.88	18.71	19.14	0.00	0.00	0.00	0.00	0.00
4H	2H	13.74	14.79	14.14	15.14	15.53	0.00	0.00	0.00	0.00	0.00
	3H	15.69	16.55	16.10	16.96	17.36	0.00	0.00	0.00	0.00	0.00
	4H	16.50	17.27	16.94	17.69	18.13	0.00	0.00	0.00	0.00	0.00
	6H	17.10	17.77	17.57	18.21	18.68	0.00	0.00	0.00	0.00	0.00
	8H	17.26	17.87	17.73	18.32	18.79	0.00	0.00	0.00	0.00	0.00
	12H	17.30	17.85	17.79	18.33	18.81	0.00	0.00	0.00	0.00	0.00
8H	4H	16.36	16.98	16.83	17.42	17.90	0.00	0.00	0.00	0.00	0.00
	6H	16.94	17.44	17.45	17.94	18.42	0.00	0.00	0.00	0.00	0.00
	8H	17.09	17.54	17.62	18.06	18.55	0.00	0.00	0.00	0.00	0.00
	12H	17.15	17.55	17.67	18.04	18.61	0.00	0.00	0.00	0.00	0.00
12H	4H	16.31	16.85	16.80	17.34	17.81	0.00	0.00	0.00	0.00	0.00
	6H	16.88	17.33	17.40	17.85	18.34	0.00	0.00	0.00	0.00	0.00
	8H	17.05	17.44	17.56	17.94	18.51	0.00	0.00	0.00	0.00	0.00