

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: P1055623

Luminaire Tested: S123R3DR-S340D940-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055623
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-S340D940-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

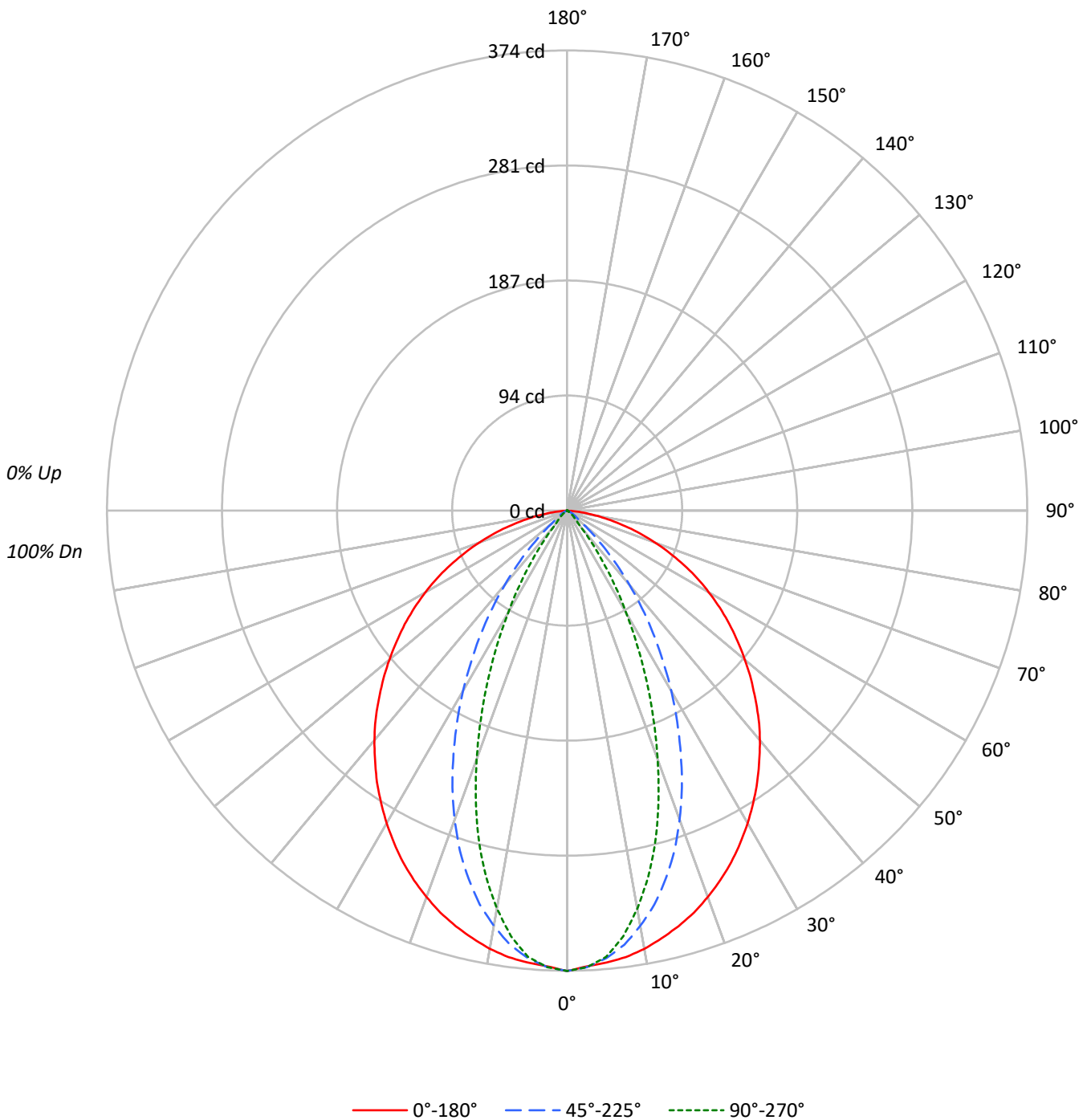
Lumens per Lamp: N/A
Luminaire Lumens: 437.9 lumens
Efficiency: N/A
Efficacy: 34.8 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 12.6
Input Voltage (V): 120
Input Current (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	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59
6	81	70	63	57	79	69	62	57	67	61	57	66	60	56	64	60	56	54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4512	4512	4512
5°	4462	4420	4407
10°	4428	4195	4020
15°	4365	3866	3464
20°	4288	3431	2758
25°	4197	2907	2034
30°	4085	2356	1335
35°	3965	1794	731
40°	3835	1240	250
45°	3686	721	145
50°	3537	283	88
55°	3386	179	40
60°	3209	113	19
65°	2990	54	11
70°	2683	28	14
75°	2278	19	19
80°	1701	28	0
85°	650	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 3686 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.3	7.8
10°-20°	87.1	19.9
20°-30°	103.8	23.7
30°-40°	88.1	20.1
40°-50°	59.9	13.7
50°-60°	37.1	8.5
60°-70°	18.8	4.3
70°-80°	7.7	1.8
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°	225.2	51.4
0°-40°	313.3	71.5
0°-60°	410.3	93.7
0°-90°	437.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	437.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	374	374	374	374	374	
5°	369	372	365	362	364	35
15°	350	341	310	285	278	99
25°	316	286	218	169	153	145
35°	269	216	122	66	50	168
45°	216	142	42	10	8	167
55°	161	71	8	3	2	144
65°	105	18	2	0	0	104
75°	49	3	0	0	0	52
85°	5	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°	374.2	374.2	374.2	374.2	374.2
2.5°	370.7	375.7	371.4	371.0	371.4
5°	368.7	372.2	365.2	362.5	364.1
7.5°	366.0	367.6	355.9	348.9	348.9
10°	361.7	360.6	342.7	331.1	328.4
12.5°	355.9	351.3	328.0	309.7	304.7
15°	349.7	340.8	309.7	285.3	277.5
17.5°	342.7	329.1	289.9	258.1	246.8
20°	334.2	315.9	267.4	228.6	215.0
22.5°	325.2	301.6	243.7	198.3	183.2
25°	315.5	286.0	218.5	168.8	152.9
27.5°	304.7	269.7	193.7	140.5	123.0
30°	293.4	252.7	169.2	113.3	95.9
32.5°	281.4	234.8	144.8	88.5	72.2
35°	269.4	216.2	121.9	65.6	49.7
37.5°	256.5	197.6	99.7	45.4	31.4
40°	243.7	179.3	78.8	28.7	15.9
42.5°	230.5	160.3	59.8	14.4	10.9
45°	216.2	141.7	42.3	10.5	8.5
47.5°	202.6	123.8	27.9	8.5	6.6
50°	188.6	106.0	15.1	6.2	4.7
52.5°	174.7	88.9	10.9	4.7	3.1
55°	161.1	71.4	8.5	3.1	1.9
57.5°	147.1	56.3	6.6	1.9	1.2
60°	133.1	41.5	4.7	1.2	0.8
62.5°	119.2	28.7	3.1	0.8	0.4
65°	104.8	17.5	1.9	0.4	0.4
67.5°	90.0	12.0	1.2	0.4	0.4
70°	76.1	8.5	0.8	0.4	0.4
72.5°	62.1	5.4	0.4	0.4	0.0
75°	48.9	3.1	0.4	0.4	0.4
77.5°	36.1	1.2	0.4	0.4	0.0
80°	24.5	0.4	0.4	0.4	0.0
82.5°	13.6	0.0	0.4	0.4	0.0
85°	4.7	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	14.28	15.56	14.65	15.88	16.19	0.00	0.00	0.00	0.00	0.00
	3H	16.23	17.36	16.61	17.69	18.06	0.00	0.00	0.00	0.00	0.00
	4H	17.05	18.11	17.46	18.46	18.84	0.00	0.00	0.00	0.00	0.00
	6H	17.61	18.58	18.02	18.95	19.34	0.00	0.00	0.00	0.00	0.00
	8H	17.73	18.65	18.17	19.04	19.45	0.00	0.00	0.00	0.00	0.00
	12H	17.76	18.64	18.19	19.02	19.45	0.00	0.00	0.00	0.00	0.00
4H	2H	14.05	15.10	14.45	15.45	15.84	0.00	0.00	0.00	0.00	0.00
	3H	16.00	16.86	16.41	17.26	17.67	0.00	0.00	0.00	0.00	0.00
	4H	16.81	17.58	17.25	18.00	18.44	0.00	0.00	0.00	0.00	0.00
	6H	17.41	18.08	17.88	18.52	18.99	0.00	0.00	0.00	0.00	0.00
	8H	17.57	18.18	18.04	18.63	19.10	0.00	0.00	0.00	0.00	0.00
	12H	17.61	18.16	18.10	18.64	19.12	0.00	0.00	0.00	0.00	0.00
8H	4H	16.67	17.29	17.14	17.73	18.21	0.00	0.00	0.00	0.00	0.00
	6H	17.25	17.75	17.76	18.25	18.73	0.00	0.00	0.00	0.00	0.00
	8H	17.40	17.85	17.93	18.37	18.86	0.00	0.00	0.00	0.00	0.00
	12H	17.46	17.86	17.98	18.35	18.92	0.00	0.00	0.00	0.00	0.00
12H	4H	16.62	17.16	17.11	17.65	18.12	0.00	0.00	0.00	0.00	0.00
	6H	17.19	17.64	17.71	18.16	18.65	0.00	0.00	0.00	0.00	0.00
	8H	17.36	17.75	17.87	18.25	18.82	0.00	0.00	0.00	0.00	0.00