

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: P1055619

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

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055619
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
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-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

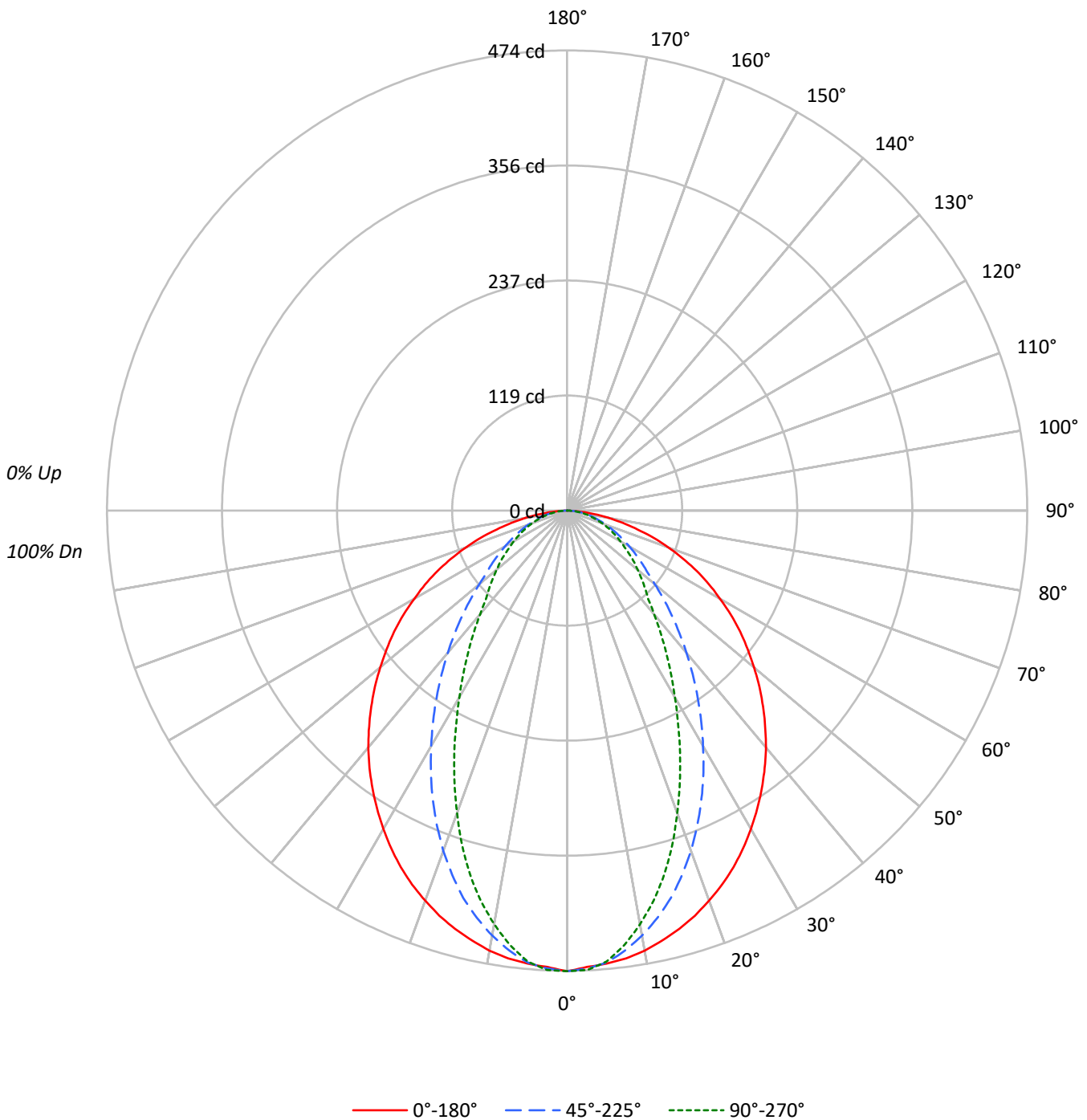
Lumens per Lamp: N/A
Luminaire Lumens: 832.1 lumens
Efficiency: N/A
Efficacy: 66.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	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	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86																												
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74																												
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65																												
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57																												
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50																												
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45																												
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40																												
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37																												
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34																												
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5721	5721	5721
5°	5669	5657	5643
10°	5635	5443	5296
15°	5568	5156	4837
20°	5486	4786	4252
25°	5392	4357	3658
30°	5271	3898	3092
35°	5144	3447	2611
40°	5016	3011	2196
45°	4864	2595	1937
50°	4712	2210	1776
55°	4572	1970	1642
60°	4381	1780	1531
65°	4202	1629	1438
70°	3916	1502	1350
75°	3503	1388	1272
80°	3006	1284	1180
85°	2116	1176	1134

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4864 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	44.0	5.3
10°-20°	116.4	14.0
20°-30°	153.3	18.4
30°-40°	155.6	18.7
40°-50°	135.2	16.3
50°-60°	106.0	12.7
60°-70°	72.0	8.7
70°-80°	39.0	4.7
80°-90°	10.7	1.3
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°	313.6	37.7
0°-40°	469.2	56.4
0°-60°	710.4	85.4
0°-90°	832.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	832.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	474	474	474	474	474	
5°	468	474	467	463	466	44
15°	446	440	413	393	388	126
25°	405	381	328	287	275	187
35°	350	308	234	190	177	219
45°	285	229	152	118	114	220
55°	218	151	94	80	78	194
65°	147	82	57	51	50	145
75°	75	38	30	28	27	80
85°	15	9	8	8	8	19
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	474.5	474.5	474.5	474.5	474.5
2.5°	470.6	476.6	472.0	472.3	473.7
5°	468.4	474.1	467.4	463.1	466.3
7.5°	465.2	469.5	457.1	450.3	451.4
10°	460.3	461.7	444.6	434.0	432.6
12.5°	453.5	451.0	429.7	414.1	411.6
15°	446.1	439.7	413.1	392.8	387.5
17.5°	437.5	426.9	393.5	368.7	360.5
20°	427.6	412.7	373.0	341.4	331.4
22.5°	417.0	397.8	350.6	313.3	303.1
25°	405.3	380.8	327.5	286.7	275.0
27.5°	392.5	363.7	304.1	260.5	247.3
30°	378.6	346.0	280.0	234.9	222.1
32.5°	364.4	327.2	256.9	211.1	198.7
35°	349.5	308.0	234.2	189.5	177.4
37.5°	334.3	288.5	212.2	168.9	157.6
40°	318.7	268.6	191.3	149.8	139.5
42.5°	302.0	248.8	171.0	131.7	123.8
45°	285.3	228.9	152.2	117.5	113.6
47.5°	268.6	208.7	134.5	107.5	104.0
50°	251.2	189.1	117.8	98.3	94.7
52.5°	234.2	170.0	104.0	89.4	86.9
55°	217.5	151.2	93.7	79.8	78.1
57.5°	200.1	132.7	83.4	72.4	70.3
60°	181.7	115.0	73.8	64.6	63.5
62.5°	165.0	98.3	65.3	57.8	56.8
65°	147.3	81.6	57.1	51.1	50.4
67.5°	129.2	67.8	49.7	44.7	44.4
70°	111.1	57.1	42.6	38.7	38.3
72.5°	93.3	47.2	35.8	33.4	32.6
75°	75.2	37.6	29.8	27.7	27.3
77.5°	58.9	29.1	23.8	22.4	22.0
80°	43.3	21.6	18.5	17.4	17.0
82.5°	28.4	14.9	13.1	12.4	12.4
85°	15.3	9.2	8.5	7.8	8.2
87.5°	5.3	3.9	3.9	3.5	3.9
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	16.62	18.11	16.98	18.42	18.74	11.77	13.26	12.13	13.57	13.89
	3H	18.50	19.84	18.88	20.17	20.53	13.40	14.73	13.77	15.06	15.42
	4H	19.26	20.52	19.66	20.86	21.24	14.03	15.29	14.43	15.64	16.02
	6H	19.82	20.98	20.24	21.35	21.74	14.52	15.68	14.93	16.05	16.44
	8H	20.00	21.10	20.42	21.49	21.89	14.69	15.79	15.12	16.18	16.59
	12H	20.09	21.15	20.53	21.53	21.96	14.82	15.87	15.25	16.25	16.68
4H	2H	16.66	17.92	17.06	18.27	18.65	12.49	13.75	12.89	14.10	14.48
	3H	18.68	19.72	19.09	20.12	20.53	14.32	15.36	14.73	15.76	16.16
	4H	19.50	20.44	19.93	20.85	21.29	15.06	16.00	15.50	16.42	16.86
	6H	20.18	21.00	20.64	21.44	21.90	15.67	16.49	16.13	16.93	17.39
	8H	20.41	21.17	20.87	21.62	22.09	15.89	16.65	16.35	17.09	17.56
	12H	20.56	21.24	21.05	21.72	22.19	16.05	16.74	16.54	17.22	17.69
8H	4H	19.52	20.29	19.99	20.73	21.20	15.45	16.21	15.91	16.65	17.12
	6H	20.25	20.88	20.75	21.37	21.85	16.18	16.81	16.67	17.30	17.78
	8H	20.52	21.09	21.03	21.60	22.08	16.46	17.03	16.98	17.54	18.03
	12H	20.73	21.23	21.24	21.72	22.29	16.71	17.21	17.22	17.70	18.26
12H	4H	19.51	20.19	19.99	20.67	21.14	15.50	16.18	15.98	16.66	17.13
	6H	20.23	20.80	20.75	21.31	21.80	16.26	16.82	16.77	17.33	17.82
	8H	20.54	21.04	21.05	21.53	22.10	16.60	17.10	17.11	17.60	18.16