

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055751

Luminaire Tested: S123R3DR-H340D927-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055751
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-H340D927-X4F0-XX-UDD-FLL-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

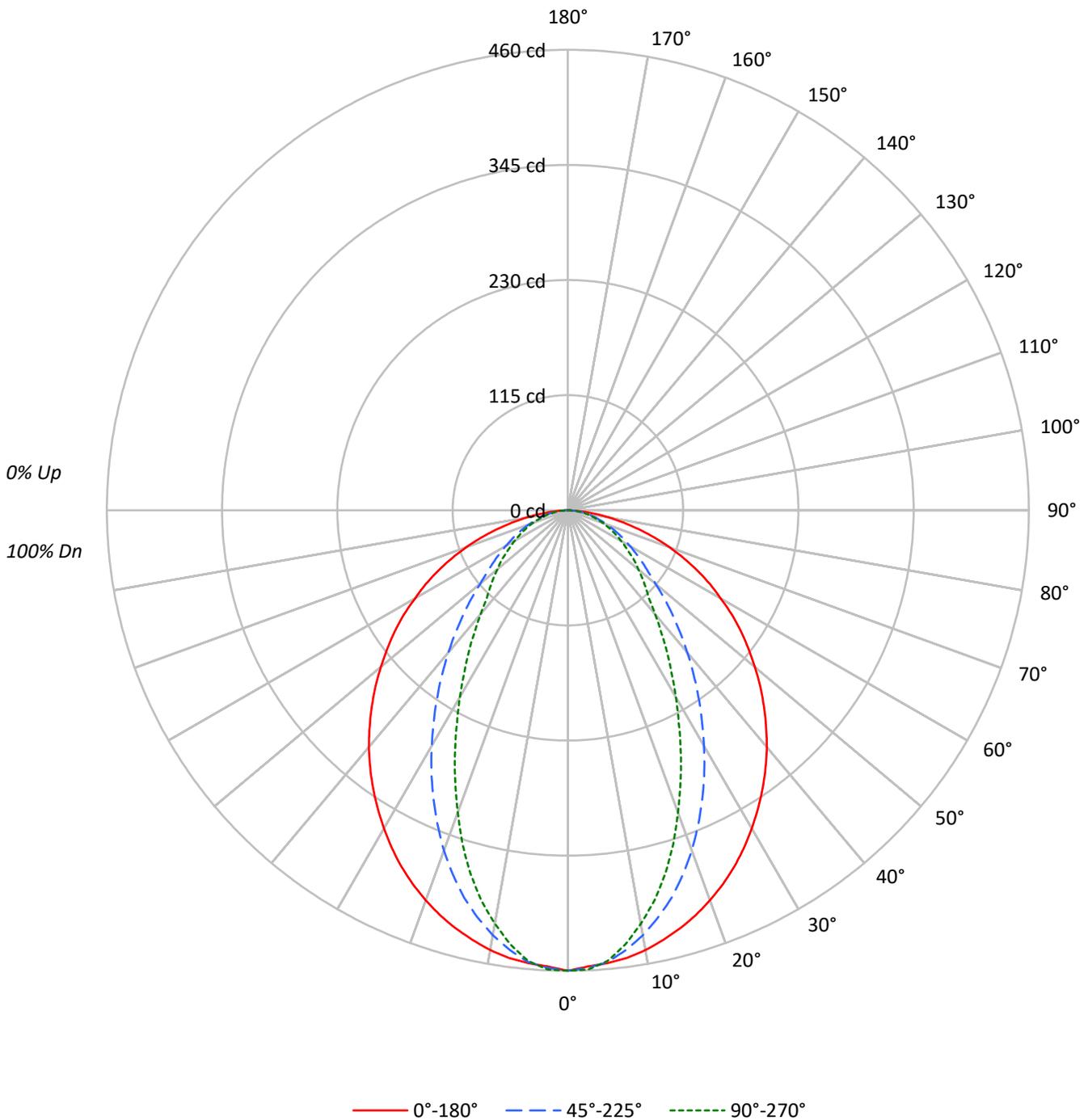
Lumens per Lamp: N/A
Luminaire Lumens: 806.5 lumens
Efficiency: N/A
Efficacy: 68.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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

TEST NUMBER: P1055751

CATALOG NUMBER: S123R3DR-H340D927-X4F0-XX-UDD-FLL-W

Luminous Intensity Polar Plot





TEST NUMBER: P1055751

CATALOG NUMBER: S123R3DR-H340D927-X4F0-XX-UDD-FLL-W

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5545	5545	5545
5°	5495	5482	5470
10°	5461	5276	5133
15°	5397	4998	4688
20°	5318	4638	4122
25°	5225	4224	3547
30°	5109	3778	2997
35°	4987	3341	2532
40°	4862	2918	2128
45°	4714	2517	1877
50°	4567	2142	1722
55°	4431	1909	1591
60°	4246	1724	1485
65°	4071	1580	1392
70°	3796	1456	1308
75°	3396	1346	1234
80°	2916	1243	1146
85°	2047	1148	1093

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4714 cd/sqm



TEST NUMBER: P1055751

CATALOG NUMBER: S123R3DR-H340D927-X4F0-XX-UDD-FLL-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	42.6	5.3
10°-20°	112.8	14.0
20°-30°	148.6	18.4
30°-40°	150.8	18.7
40°-50°	131.1	16.3
50°-60°	102.7	12.7
60°-70°	69.8	8.7
70°-80°	37.8	4.7
80°-90°	10.4	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°	304.0	37.7
0°-40°	454.8	56.4
0°-60°	688.6	85.4
0°-90°	806.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	806.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	460	460	460	460	460	
5°	454	460	453	449	452	43
15°	432	426	400	381	376	122
25°	393	369	318	278	267	181
35°	339	299	227	184	172	212
45°	276	222	148	114	110	213
55°	211	146	91	77	76	188
65°	143	79	55	50	49	141
75°	73	36	29	27	26	78
85°	15	9	8	8	8	19
90°	0	0	0	0	0	



TEST NUMBER: P1055751

CATALOG NUMBER: S123R3DR-H340D927-X4F0-XX-UDD-FLL-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	459.9	459.9	459.9	459.9	459.9
2.5°	456.1	461.9	457.5	457.8	459.2
5°	454.0	459.5	453.0	448.9	452.0
7.5°	450.9	455.1	443.0	436.5	437.5
10°	446.1	447.5	431.0	420.7	419.3
12.5°	439.6	437.2	416.5	401.4	399.0
15°	432.4	426.2	400.4	380.8	375.6
17.5°	424.1	413.8	381.5	357.4	349.5
20°	414.5	400.0	361.5	330.9	321.3
22.5°	404.2	385.6	339.8	303.7	293.7
25°	392.8	369.1	317.5	277.9	266.6
27.5°	380.4	352.6	294.8	252.5	239.7
30°	367.0	335.4	271.4	227.7	215.3
32.5°	353.2	317.1	249.0	204.7	192.6
35°	338.8	298.6	227.0	183.7	172.0
37.5°	324.0	279.6	205.7	163.7	152.7
40°	308.9	260.4	185.4	145.2	135.2
42.5°	292.7	241.1	165.8	127.6	120.0
45°	276.5	221.9	147.6	113.9	110.1
47.5°	260.4	202.2	130.4	104.2	100.8
50°	243.5	183.3	114.2	95.3	91.8
52.5°	227.0	164.8	100.8	86.7	84.3
55°	210.8	146.5	90.8	77.4	75.7
57.5°	194.0	128.6	80.8	70.2	68.1
60°	176.1	111.4	71.5	62.6	61.6
62.5°	159.9	95.3	63.3	56.1	55.0
65°	142.7	79.1	55.4	49.5	48.8
67.5°	125.2	65.7	48.2	43.3	43.0
70°	107.7	55.4	41.3	37.5	37.1
72.5°	90.5	45.7	34.7	32.3	31.6
75°	72.9	36.5	28.9	26.8	26.5
77.5°	57.1	28.2	23.0	21.7	21.3
80°	42.0	21.0	17.9	16.9	16.5
82.5°	27.5	14.4	12.7	12.0	12.0
85°	14.8	8.9	8.3	7.6	7.9
87.5°	5.2	3.8	3.8	3.4	3.8
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P1055751

CATALOG NUMBER: S123R3DR-H340D927-X4F0-XX-UDD-FLL-W

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	16.51	18.00	16.87	18.31	18.63	11.66	13.15	12.03	13.47	13.78
	3H	18.40	19.73	18.77	20.06	20.42	13.29	14.62	13.66	14.95	15.31
	4H	19.15	20.41	19.55	20.76	21.14	13.92	15.18	14.32	15.53	15.91
	6H	19.72	20.88	20.13	21.24	21.64	14.41	15.57	14.82	15.94	16.33
	8H	19.89	20.99	20.32	21.38	21.78	14.58	15.69	15.01	16.07	16.48
	12H	19.99	21.04	20.42	21.43	21.85	14.70	15.76	15.14	16.14	16.57
4H	2H	16.55	17.81	16.95	18.16	18.54	12.39	13.64	12.79	13.99	14.37
	3H	18.57	19.62	18.98	20.02	20.42	14.21	15.25	14.62	15.65	16.05
	4H	19.39	20.33	19.82	20.75	21.18	14.95	15.89	15.39	16.31	16.75
	6H	20.07	20.89	20.53	21.33	21.79	15.56	16.38	16.02	16.82	17.28
	8H	20.30	21.07	20.77	21.51	21.98	15.78	16.54	16.24	16.98	17.45
	12H	20.45	21.14	20.94	21.62	22.09	15.94	16.63	16.43	17.10	17.58
8H	4H	19.41	20.18	19.88	20.62	21.09	15.34	16.10	15.80	16.54	17.01
	6H	20.14	20.77	20.64	21.27	21.74	16.07	16.70	16.56	17.19	17.67
	8H	20.41	20.98	20.93	21.49	21.98	16.35	16.92	16.87	17.43	17.92
	12H	20.62	21.12	21.13	21.61	22.18	16.60	17.10	17.11	17.59	18.15
12H	4H	19.40	20.08	19.88	20.56	21.03	15.39	16.07	15.87	16.55	17.02
	6H	20.13	20.69	20.64	21.20	21.69	16.15	16.71	16.66	17.22	17.71
	8H	20.43	20.93	20.94	21.42	21.99	16.49	16.99	17.00	17.49	18.05