

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: P1055757

Luminaire Tested: S123R3DR-H340D935-X4F0-XX-UDD-FLL-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055757
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-H340D935-X4F0-XX-UDD-FLL-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

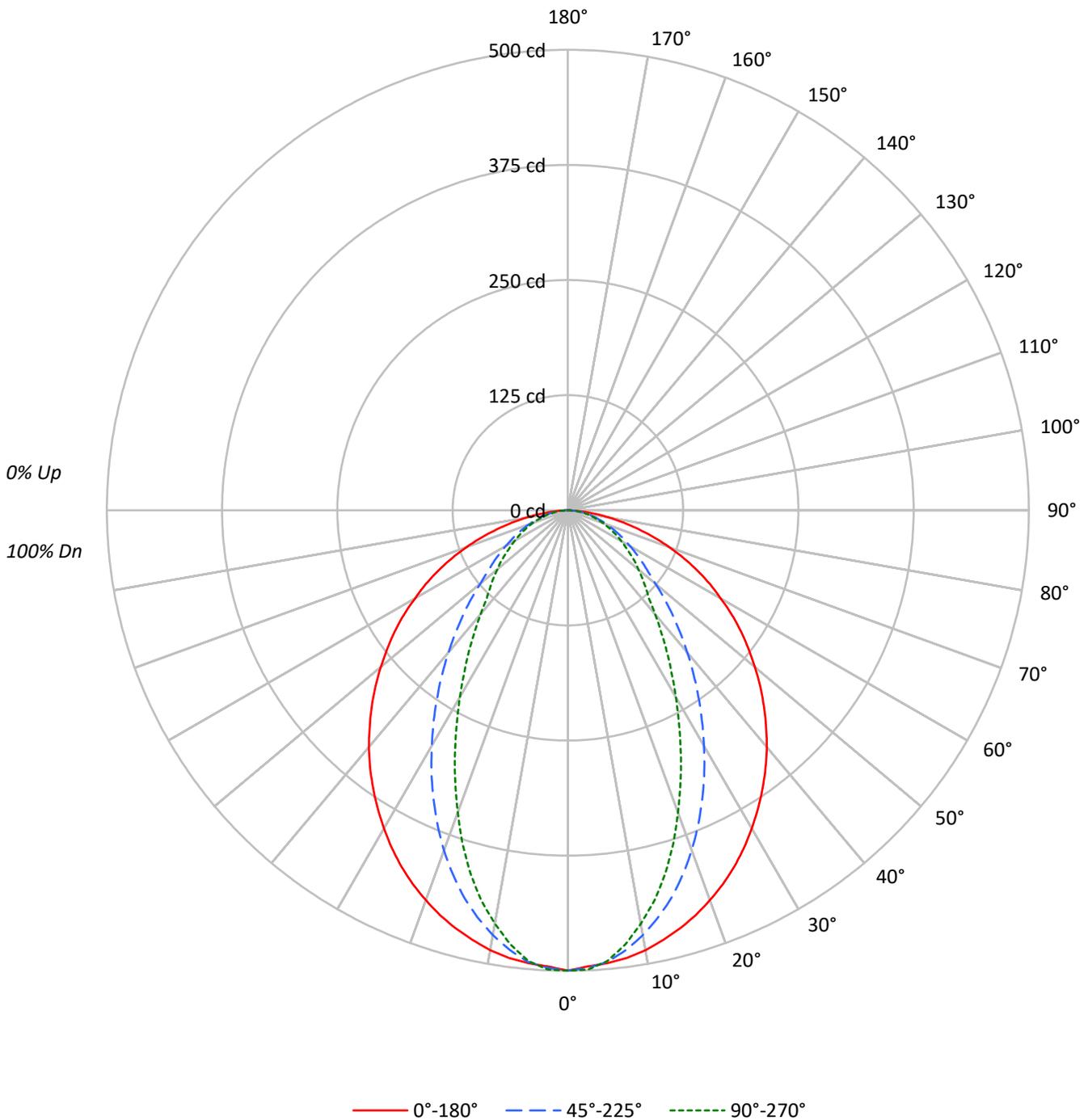
Lumens per Lamp: N/A
Luminaire Lumens: 876.6 lumens
Efficiency: N/A
Efficacy: 74.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
Input Voltage (V): 120
Input Current (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	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°	6026	6026	6026
5°	5973	5958	5945
10°	5936	5734	5579
15°	5865	5431	5095
20°	5780	5041	4480
25°	5679	4591	3854
30°	5553	4107	3258
35°	5419	3631	2751
40°	5283	3171	2312
45°	5125	2735	2039
50°	4965	2328	1872
55°	4818	2075	1728
60°	4615	1876	1613
65°	4425	1717	1515
70°	4124	1583	1424
75°	3694	1463	1342
80°	3166	1347	1243
85°	2227	1245	1190

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5125 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.3	5.3
10°-20°	122.6	14.0
20°-30°	161.5	18.4
30°-40°	163.9	18.7
40°-50°	142.5	16.3
50°-60°	111.6	12.7
60°-70°	75.8	8.7
70°-80°	41.1	4.7
80°-90°	11.3	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°	330.4	37.7
0°-40°	494.3	56.4
0°-60°	748.4	85.4
0°-90°	876.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	876.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	500	500	500	500	500	
5°	494	499	492	488	491	47
15°	470	463	435	414	408	132
25°	427	401	345	302	290	197
35°	368	324	247	200	187	230
45°	301	241	160	124	120	232
55°	229	159	99	84	82	205
65°	155	86	60	54	53	153
75°	79	40	31	29	29	85
85°	16	10	9	8	9	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	499.8	499.8	499.8	499.8	499.8
2.5°	495.7	502.1	497.2	497.6	499.1
5°	493.5	499.4	492.3	487.9	491.2
7.5°	490.1	494.6	481.5	474.4	475.5
10°	484.9	486.4	468.4	457.2	455.7
12.5°	477.8	475.1	452.7	436.3	433.7
15°	469.9	463.2	435.1	413.8	408.2
17.5°	460.9	449.7	414.6	388.4	379.8
20°	450.5	434.8	392.9	359.6	349.2
22.5°	439.3	419.1	369.4	330.1	319.3
25°	426.9	401.1	345.1	302.1	289.7
27.5°	413.5	383.2	320.4	274.4	260.6
30°	398.9	364.5	295.0	247.5	234.0
32.5°	383.9	344.7	270.7	222.4	209.3
35°	368.2	324.5	246.7	199.6	186.9
37.5°	352.2	303.9	223.6	177.9	166.0
40°	335.7	283.0	201.5	157.8	146.9
42.5°	318.1	262.1	180.2	138.7	130.5
45°	300.6	241.1	160.4	123.7	119.6
47.5°	283.0	219.8	141.7	113.3	109.5
50°	264.7	199.3	124.1	103.6	99.8
52.5°	246.7	179.1	109.5	94.2	91.6
55°	229.2	159.3	98.7	84.1	82.2
57.5°	210.8	139.8	87.9	76.3	74.0
60°	191.4	121.1	77.8	68.0	66.9
62.5°	173.8	103.6	68.8	60.9	59.8
65°	155.1	86.0	60.2	53.8	53.1
67.5°	136.1	71.4	52.3	47.1	46.7
70°	117.0	60.2	44.9	40.7	40.4
72.5°	98.3	49.7	37.8	35.1	34.4
75°	79.3	39.6	31.4	29.2	28.8
77.5°	62.1	30.7	25.0	23.6	23.2
80°	45.6	22.8	19.4	18.3	17.9
82.5°	29.9	15.7	13.8	13.1	13.1
85°	16.1	9.7	9.0	8.2	8.6
87.5°	5.6	4.1	4.1	3.7	4.1
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	16.80	18.29	17.16	18.60	18.92	11.95	13.44	12.31	13.76	14.07
	3H	18.68	20.02	19.06	20.35	20.71	13.58	14.91	13.95	15.24	15.60
	4H	19.44	20.70	19.84	21.05	21.43	14.21	15.47	14.61	15.82	16.20
	6H	20.01	21.17	20.42	21.53	21.93	14.70	15.86	15.11	16.23	16.62
	8H	20.18	21.28	20.61	21.67	22.07	14.87	15.98	15.30	16.37	16.77
	12H	20.28	21.33	20.71	21.72	22.14	15.00	16.05	15.43	16.44	16.87
4H	2H	16.84	18.10	17.24	18.45	18.83	12.68	13.93	13.08	14.28	14.66
	3H	18.86	19.90	19.27	20.31	20.71	14.50	15.54	14.91	15.94	16.34
	4H	19.68	20.62	20.11	21.03	21.47	15.24	16.18	15.68	16.60	17.04
	6H	20.36	21.18	20.82	21.62	22.08	15.85	16.67	16.31	17.11	17.57
	8H	20.59	21.36	21.06	21.80	22.27	16.07	16.83	16.53	17.28	17.74
	12H	20.74	21.43	21.23	21.91	22.38	16.24	16.92	16.72	17.40	17.87
8H	4H	19.70	20.47	20.17	20.91	21.38	15.63	16.39	16.09	16.84	17.30
	6H	20.43	21.06	20.93	21.56	22.03	16.36	16.99	16.85	17.48	17.96
	8H	20.70	21.27	21.22	21.78	22.27	16.64	17.21	17.16	17.72	18.21
	12H	20.91	21.41	21.42	21.90	22.47	16.89	17.39	17.40	17.88	18.45
12H	4H	19.69	20.37	20.17	20.85	21.32	15.68	16.36	16.16	16.84	17.31
	6H	20.42	20.98	20.93	21.49	21.98	16.44	17.00	16.95	17.51	18.00
	8H	20.72	21.22	21.23	21.71	22.28	16.78	17.28	17.29	17.78	18.34