

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: P1055650

Luminaire Tested: S123R3DR-S560D940-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055650
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-S560D940-X4F0-XX-UDD-FLL-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: -

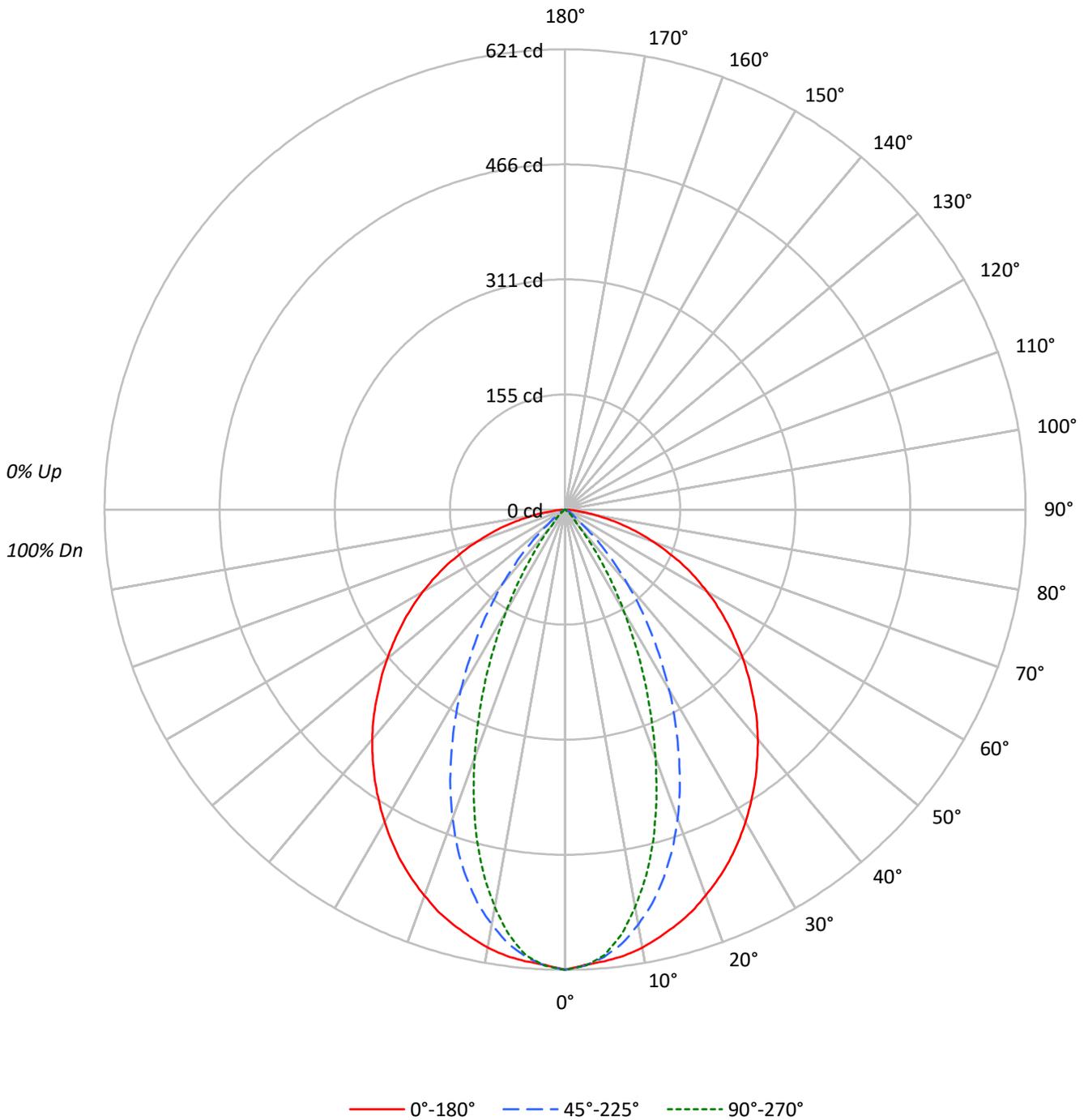
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 726.5 lumens
Efficiency: N/A
Efficacy: 38.0 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): 19.1
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	58	79	69	62	57	67	61	57	66	61	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°	7485	7485	7485
5°	7403	7333	7310
10°	7348	6961	6670
15°	7242	6414	5747
20°	7113	5693	4577
25°	6964	4822	3375
30°	6777	3909	2215
35°	6578	2976	1213
40°	6365	2057	415
45°	6116	1197	242
50°	5871	471	144
55°	5616	298	67
60°	5327	186	31
65°	4961	91	17
70°	4449	46	21
75°	3778	28	28
80°	2819	42	0
85°	1065	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6116 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	56.9	7.8
10°-20°	144.4	19.9
20°-30°	172.3	23.7
30°-40°	146.1	20.1
40°-50°	99.3	13.7
50°-60°	61.6	8.5
60°-70°	31.2	4.3
70°-80°	12.7	1.7
80°-90°	1.9	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°	373.6	51.4
0°-40°	519.8	71.5
0°-60°	680.7	93.7
0°-90°	726.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	726.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	621	621	621	621	621	
5°	612	618	606	601	604	58
15°	580	565	514	473	460	164
25°	524	475	362	280	254	241
35°	447	359	202	109	82	279
45°	359	235	70	17	14	277
55°	267	118	14	5	3	239
65°	174	29	3	1	1	172
75°	81	5	1	1	1	86
85°	8	0	0	1	0	14
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	620.8	620.8	620.8	620.8	620.8
2.5°	615.0	623.3	616.3	615.6	616.3
5°	611.7	617.5	605.9	601.4	604.0
7.5°	607.2	609.8	590.5	578.9	578.9
10°	600.2	598.2	568.6	549.3	544.8
12.5°	590.5	582.8	544.1	513.9	505.5
15°	580.2	565.4	513.9	473.3	460.4
17.5°	568.6	546.1	481.0	428.2	409.5
20°	554.4	524.2	443.7	379.3	356.7
22.5°	539.6	500.3	404.4	329.1	303.9
25°	523.5	474.6	362.5	280.1	253.7
27.5°	505.5	447.5	321.3	233.1	204.1
30°	486.8	419.2	280.8	188.0	159.1
32.5°	466.9	389.6	240.2	146.8	119.8
35°	446.9	358.7	202.2	108.8	82.4
37.5°	425.6	327.8	165.5	75.3	52.2
40°	404.4	297.5	130.7	47.7	26.4
42.5°	382.5	265.9	99.2	23.8	18.0
45°	358.7	235.0	70.2	17.4	14.2
47.5°	336.1	205.4	46.4	14.2	10.9
50°	313.0	175.8	25.1	10.3	7.7
52.5°	289.8	147.5	18.0	7.7	5.2
55°	267.2	118.5	14.2	5.2	3.2
57.5°	244.1	93.4	10.9	3.2	1.9
60°	220.9	68.9	7.7	1.9	1.3
62.5°	197.7	47.7	5.2	1.3	0.6
65°	173.9	29.0	3.2	0.6	0.6
67.5°	149.4	20.0	1.9	0.6	0.6
70°	126.2	14.2	1.3	0.6	0.6
72.5°	103.0	9.0	0.6	0.6	0.0
75°	81.1	5.2	0.6	0.6	0.6
77.5°	59.9	1.9	0.6	0.6	0.0
80°	40.6	0.6	0.6	0.6	0.0
82.5°	22.5	0.0	0.6	0.6	0.0
85°	7.7	0.0	0.0	0.6	0.0
87.5°	0.0	0.0	0.0	0.6	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)