

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: P1055635

Luminaire Tested: S123R3DR-S560D840-X4F0-XX-UDD-FLL-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2019
Report Number: P1055635
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-S560D840-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, 80 CRI LEDS
Ballast/Driver: -

Summary

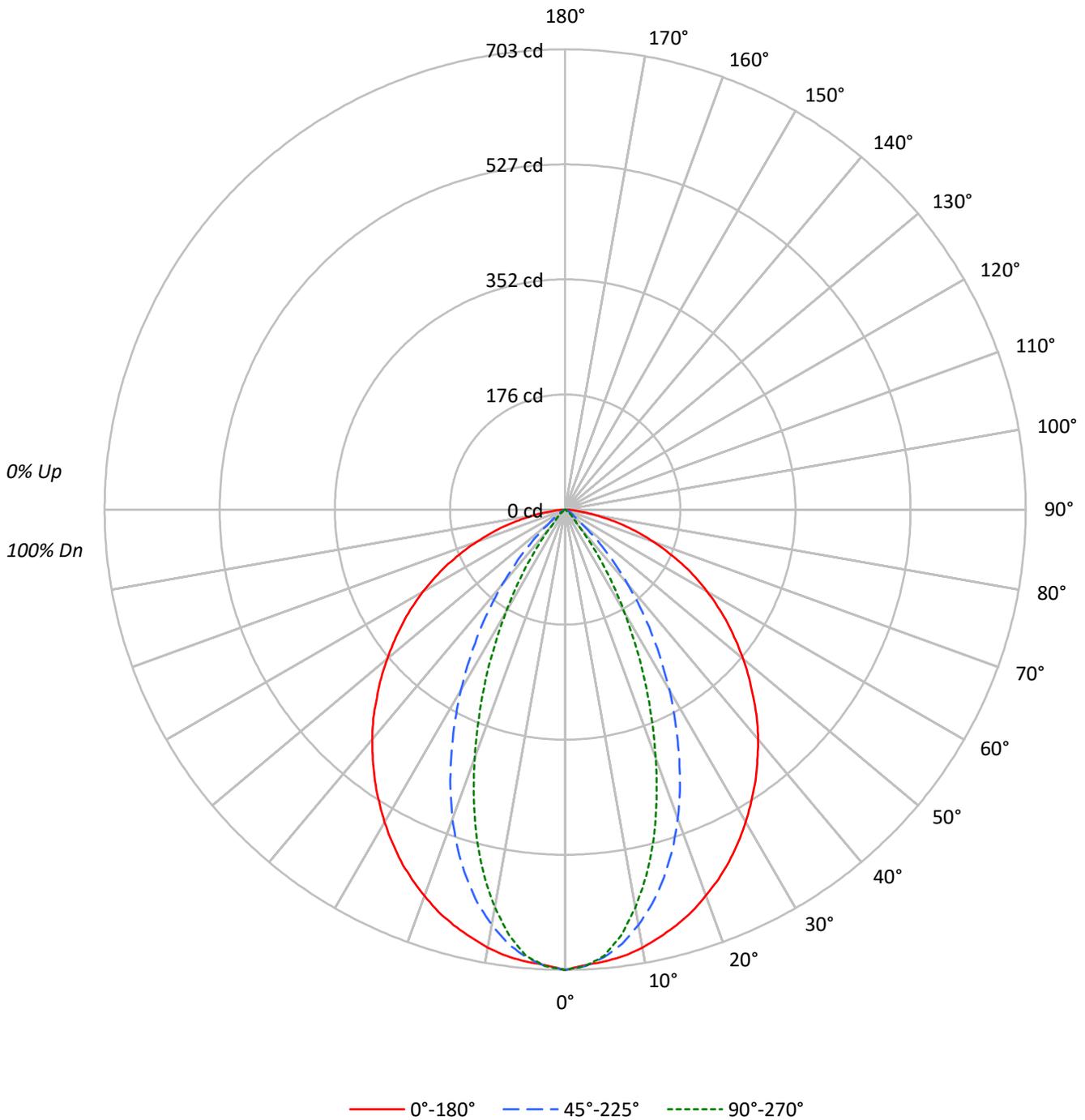
Lumens per Lamp: N/A
Luminaire Lumens: 822.7 lumens
Efficiency: N/A
Efficacy: 43.1 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	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	112	108	105	103	109	106	104	101	102	100	98	98	97	95	95	93	92	90				90
2	105	99	94	89	102	97	92	88	93	90	86	90	87	84	87	85	83	81				81
3	98	90	84	79	96	88	83	78	86	81	77	83	79	76	81	77	74	73				73
4	92	82	75	70	90	81	75	70	79	73	69	77	72	68	75	71	67	65				65
5	86	76	69	63	84	75	68	63	73	67	62	71	66	62	69	65	61	59				59
6	81	70	63	58	79	69	62	57	67	61	57	66	61	56	64	60	56	54				54
7	76	65	58	53	74	64	57	52	63	57	52	61	56	52	60	55	52	50				50
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				46
9	68	56	49	45	66	56	49	45	55	49	45	54	48	44	53	48	44	43				43
10	64	53	46	42	63	52	46	42	51	46	41	51	45	41	50	45	41	40				40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8476	8476	8476
5°	8385	8305	8279
10°	8321	7883	7554
15°	8202	7264	6508
20°	8056	6447	5183
25°	7887	5462	3822
30°	7675	4427	2507
35°	7449	3370	1373
40°	7208	2329	471
45°	6926	1356	273
50°	6647	533	165
55°	6361	336	76
60°	6031	212	36
65°	5617	103	20
70°	5037	53	25
75°	4281	33	33
80°	3187	49	0
85°	1217	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6926 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.5	7.8
10°-20°	163.6	19.9
20°-30°	195.1	23.7
30°-40°	165.5	20.1
40°-50°	112.5	13.7
50°-60°	69.7	8.5
60°-70°	35.3	4.3
70°-80°	14.4	1.7
80°-90°	2.2	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°	423.1	51.4
0°-40°	588.6	71.5
0°-60°	770.8	93.7
0°-90°	822.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	822.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	703	703	703	703	703	
5°	693	699	686	681	684	66
15°	657	640	582	536	521	185
25°	593	538	411	317	287	273
35°	506	406	229	123	93	316
45°	406	266	80	20	16	314
55°	303	134	16	6	4	270
65°	197	33	4	1	1	194
75°	92	6	1	1	1	98
85°	9	0	0	1	0	16
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	703.0	703.0	703.0	703.0	703.0
2.5°	696.4	705.9	697.9	697.2	697.9
5°	692.8	699.4	686.2	681.1	684.1
7.5°	687.7	690.6	668.7	655.6	655.6
10°	679.7	677.5	643.9	622.1	617.0
12.5°	668.7	660.0	616.2	582.0	572.5
15°	657.1	640.3	582.0	536.0	521.4
17.5°	643.9	618.4	544.8	485.0	463.8
20°	627.9	593.6	502.5	429.5	404.0
22.5°	611.1	566.6	458.0	372.7	344.2
25°	592.9	537.5	410.6	317.2	287.3
27.5°	572.5	506.8	363.9	264.0	231.2
30°	551.3	474.8	318.0	212.9	180.1
32.5°	528.7	441.2	272.0	166.3	135.6
35°	506.1	406.2	229.0	123.2	93.3
37.5°	482.0	371.2	187.4	85.3	59.1
40°	458.0	336.9	148.0	54.0	29.9
42.5°	433.2	301.2	112.3	27.0	20.4
45°	406.2	266.2	79.5	19.7	16.0
47.5°	380.7	232.6	52.5	16.0	12.4
50°	354.4	199.1	28.4	11.7	8.8
52.5°	328.2	167.0	20.4	8.8	5.8
55°	302.6	134.2	16.0	5.8	3.6
57.5°	276.4	105.7	12.4	3.6	2.2
60°	250.1	78.0	8.8	2.2	1.5
62.5°	223.9	54.0	5.8	1.5	0.7
65°	196.9	32.8	3.6	0.7	0.7
67.5°	169.2	22.6	2.2	0.7	0.7
70°	142.9	16.0	1.5	0.7	0.7
72.5°	116.7	10.2	0.7	0.7	0.0
75°	91.9	5.8	0.7	0.7	0.7
77.5°	67.8	2.2	0.7	0.7	0.0
80°	45.9	0.7	0.7	0.7	0.0
82.5°	25.5	0.0	0.7	0.7	0.0
85°	8.8	0.0	0.0	0.7	0.0
87.5°	0.0	0.0	0.0	0.7	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)