

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: P1055607

Luminaire Tested: S123R3DR-S340D835-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055607
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-S340D835-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

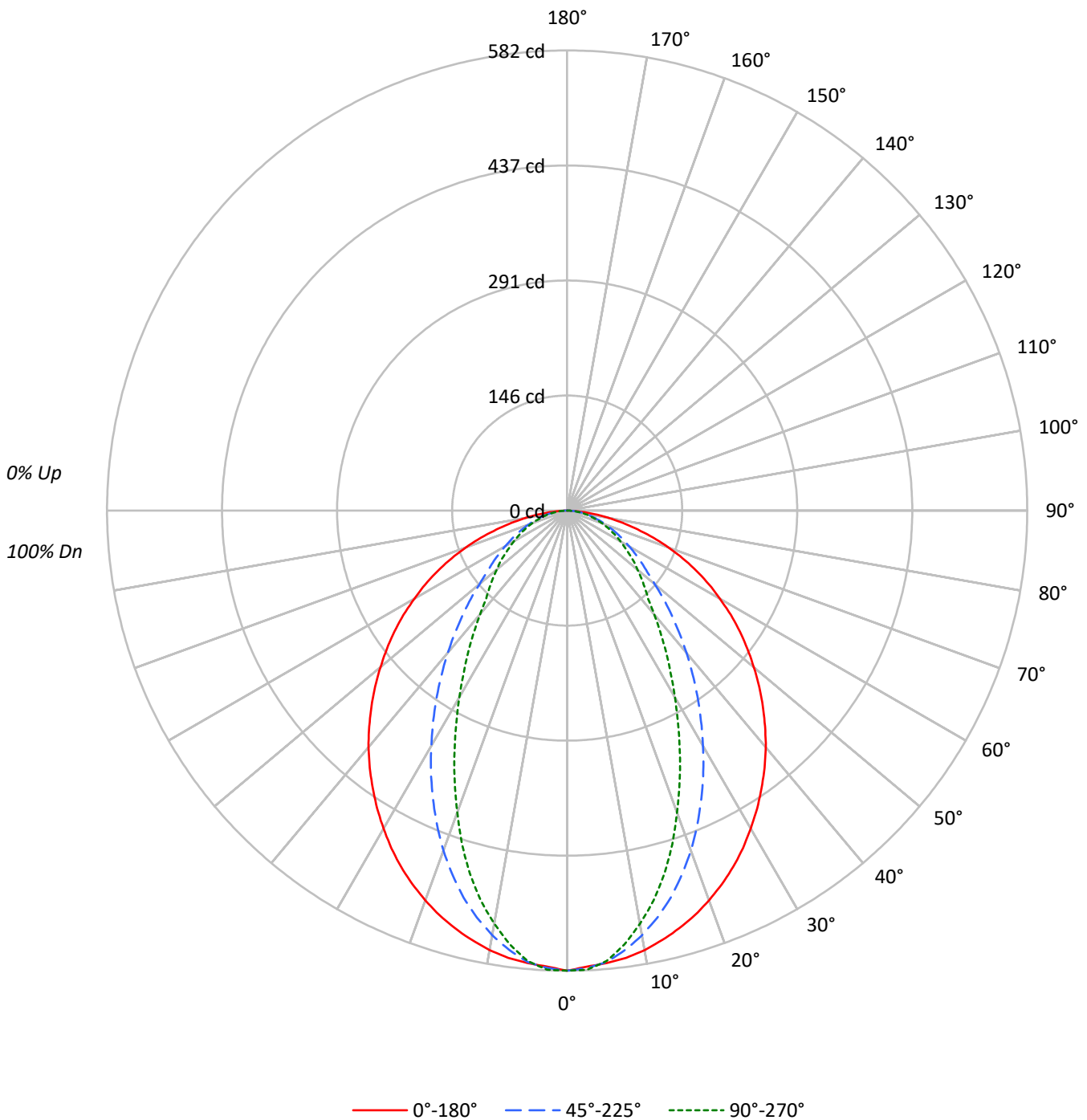
Lumens per Lamp: N/A
Luminaire Lumens: 1020.6 lumens
Efficiency: N/A
Efficacy: 81.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	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°	7016	7016	7016
5°	6953	6937	6921
10°	6911	6677	6496
15°	6829	6323	5933
20°	6729	5870	5215
25°	6613	5344	4487
30°	6465	4781	3794
35°	6310	4229	3203
40°	6152	3692	2693
45°	5966	3183	2375
50°	5781	2710	2179
55°	5608	2415	2014
60°	5375	2182	1878
65°	5152	2000	1763
70°	4801	1840	1657
75°	4300	1705	1561
80°	3687	1569	1451
85°	2587	1439	1383

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5966 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.9	5.3
10°-20°	142.7	14.0
20°-30°	188.0	18.4
30°-40°	190.8	18.7
40°-50°	165.9	16.3
50°-60°	130.0	12.7
60°-70°	88.3	8.6
70°-80°	47.9	4.7
80°-90°	13.2	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°	384.7	37.7
0°-40°	575.5	56.4
0°-60°	871.3	85.4
0°-90°	1020.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1020.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	582	582	582	582	582	
5°	574	582	573	568	572	55
15°	547	539	507	482	475	154
25°	497	467	402	352	337	229
35°	429	378	287	232	218	268
45°	350	281	187	144	139	270
55°	267	185	115	98	96	238
65°	181	100	70	63	62	178
75°	92	46	37	34	34	99
85°	19	11	10	10	10	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	581.9	581.9	581.9	581.9	581.9
2.5°	577.2	584.6	578.9	579.3	581.1
5°	574.5	581.5	573.2	568.0	571.9
7.5°	570.6	575.8	560.6	552.3	553.6
10°	564.5	566.3	545.4	532.3	530.6
12.5°	556.3	553.2	527.1	507.9	504.9
15°	547.1	539.3	506.6	481.8	475.3
17.5°	536.7	523.6	482.7	452.2	442.2
20°	524.5	506.2	457.5	418.7	406.5
22.5°	511.4	487.9	430.0	384.3	371.7
25°	497.1	467.0	401.7	351.7	337.3
27.5°	481.4	446.1	373.0	319.5	303.4
30°	464.4	424.4	343.4	288.1	272.5
32.5°	447.0	401.3	315.1	259.0	243.7
35°	428.7	377.8	287.3	232.4	217.6
37.5°	410.0	353.9	260.3	207.2	193.3
40°	390.9	329.5	234.6	183.7	171.1
42.5°	370.4	305.1	209.8	161.5	151.9
45°	349.9	280.7	186.7	144.1	139.3
47.5°	329.5	255.9	165.0	131.9	127.5
50°	308.2	232.0	144.5	120.6	116.2
52.5°	287.3	208.5	127.5	109.7	106.6
55°	266.8	185.4	114.9	97.9	95.8
57.5°	245.5	162.8	102.3	88.8	86.2
60°	222.9	141.0	90.5	79.2	77.9
62.5°	202.4	120.6	80.1	70.9	69.6
65°	180.6	100.1	70.1	62.7	61.8
67.5°	158.4	83.1	60.9	54.8	54.4
70°	136.2	70.1	52.2	47.4	47.0
72.5°	114.5	57.9	44.0	40.9	40.0
75°	92.3	46.1	36.6	34.0	33.5
77.5°	72.3	35.7	29.2	27.4	27.0
80°	53.1	26.6	22.6	21.3	20.9
82.5°	34.8	18.3	16.1	15.2	15.2
85°	18.7	11.3	10.4	9.6	10.0
87.5°	6.5	4.8	4.8	4.4	4.8
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	17.33	18.82	17.69	19.13	19.45	12.48	13.97	12.84	14.28	14.60
	3H	19.21	20.55	19.59	20.88	21.24	14.10	15.44	14.48	15.77	16.13
	4H	19.97	21.23	20.37	21.57	21.95	14.74	16.00	15.14	16.34	16.72
	6H	20.53	21.69	20.95	22.06	22.45	15.23	16.39	15.64	16.76	17.15
	8H	20.71	21.81	21.13	22.20	22.60	15.40	16.50	15.83	16.89	17.29
	12H	20.80	21.86	21.24	22.24	22.67	15.52	16.58	15.95	16.96	17.39
4H	2H	17.37	18.63	17.77	18.98	19.36	13.21	14.46	13.61	14.81	15.19
	3H	19.39	20.43	19.80	20.83	21.24	15.02	16.07	15.44	16.47	16.87
	4H	20.21	21.15	20.64	21.56	22.00	15.77	16.71	16.20	17.13	17.57
	6H	20.89	21.71	21.35	22.15	22.61	16.38	17.20	16.84	17.64	18.10
	8H	21.12	21.88	21.59	22.33	22.80	16.59	17.36	17.06	17.80	18.27
	12H	21.27	21.95	21.76	22.43	22.90	16.76	17.44	17.24	17.92	18.39
8H	4H	20.23	21.00	20.70	21.44	21.91	16.15	16.92	16.62	17.36	17.83
	6H	20.96	21.59	21.46	22.08	22.56	16.88	17.51	17.38	18.01	18.48
	8H	21.23	21.80	21.75	22.31	22.80	17.17	17.74	17.68	18.25	18.73
	12H	21.44	21.94	21.95	22.43	23.00	17.41	17.91	17.92	18.41	18.97
12H	4H	20.22	20.90	20.70	21.38	21.85	16.21	16.89	16.69	17.37	17.84
	6H	20.95	21.51	21.46	22.02	22.51	16.96	17.53	17.48	18.04	18.53
	8H	21.25	21.75	21.76	22.24	22.81	17.31	17.81	17.82	18.30	18.87