

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: P1055622

Luminaire Tested: S123R3DR-S340D935-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055622
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-S340D935-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, 90 CRI LEDS
Ballast/Driver: -

Summary

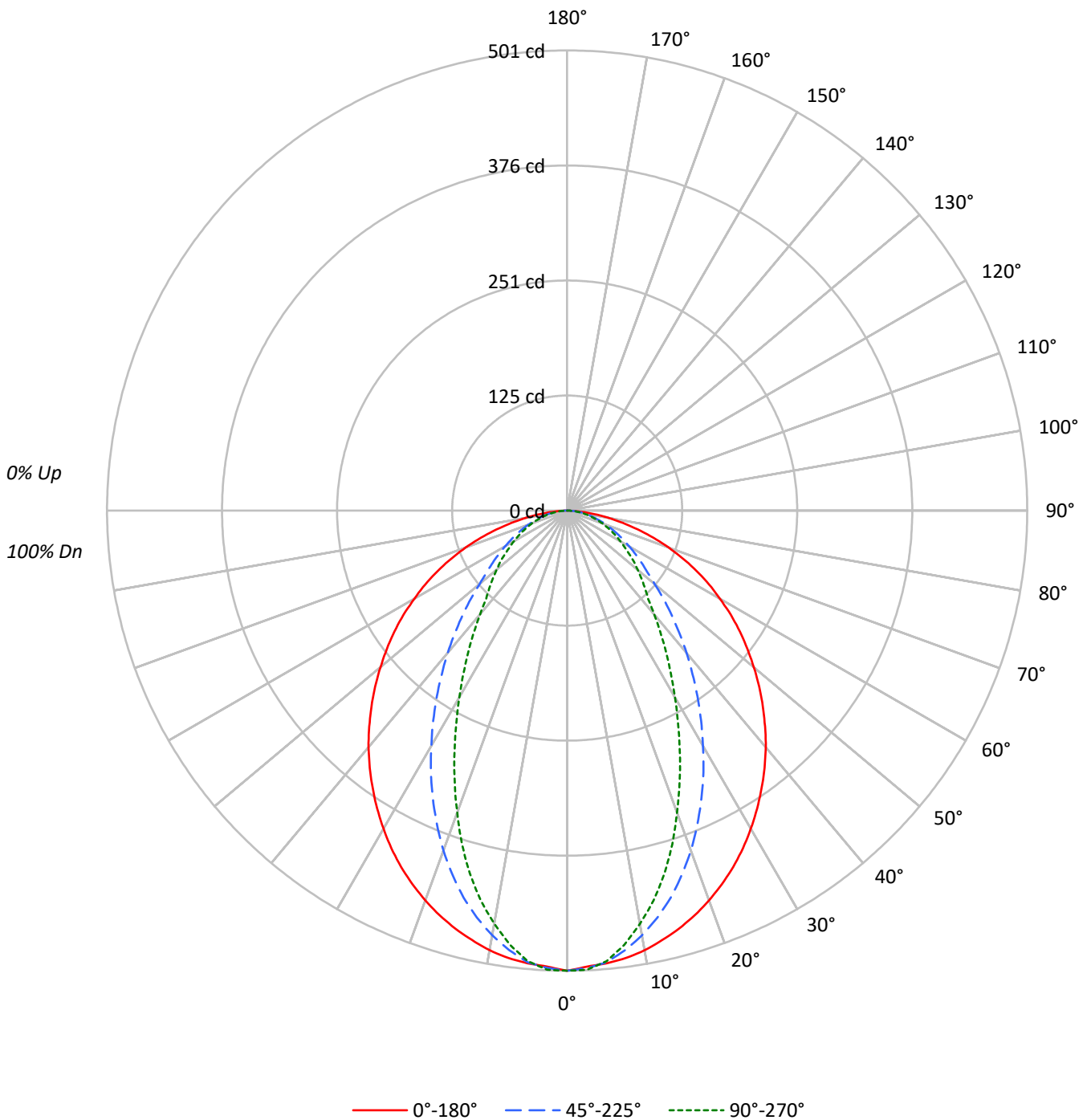
Lumens per Lamp: N/A
Luminaire Lumens: 878.7 lumens
Efficiency: N/A
Efficacy: 69.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	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				
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°	6040	6040	6040
5°	5987	5974	5959
10°	5951	5749	5592
15°	5880	5445	5108
20°	5794	5054	4491
25°	5694	4601	3863
30°	5567	4117	3266
35°	5432	3640	2758
40°	5296	3179	2318
45°	5137	2742	2044
50°	4976	2333	1878
55°	4828	2079	1732
60°	4627	1878	1618
65°	4436	1720	1518
70°	4135	1586	1428
75°	3699	1467	1346
80°	3173	1354	1250
85°	2227	1245	1190

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 5137 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.4	5.3
10°-20°	122.9	14.0
20°-30°	161.9	18.4
30°-40°	164.3	18.7
40°-50°	142.8	16.3
50°-60°	111.9	12.7
60°-70°	76.0	8.7
70°-80°	41.2	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°	331.2	37.7
0°-40°	495.5	56.4
0°-60°	750.2	85.4
0°-90°	878.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	878.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	501	501	501	501	501	
5°	495	501	494	489	492	47
15°	471	464	436	415	409	133
25°	428	402	346	303	290	197
35°	369	325	247	200	187	231
45°	301	242	161	124	120	233
55°	230	160	99	84	82	205
65°	156	86	60	54	53	154
75°	79	40	32	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°	501.0	501.0	501.0	501.0	501.0
2.5°	496.9	503.3	498.4	498.8	500.3
5°	494.7	500.7	493.6	489.1	492.4
7.5°	491.3	495.8	482.7	475.6	476.7
10°	486.1	487.6	469.6	458.3	456.8
12.5°	478.9	476.3	453.8	437.3	434.7
15°	471.1	464.3	436.2	414.9	409.2
17.5°	462.1	450.8	415.6	389.4	380.8
20°	451.6	435.8	393.9	360.5	350.0
22.5°	440.3	420.1	370.3	330.9	320.0
25°	428.0	402.1	345.9	302.8	290.4
27.5°	414.5	384.1	321.2	275.1	261.2
30°	399.9	365.4	295.7	248.1	234.6
32.5°	384.9	345.5	271.3	223.0	209.9
35°	369.1	325.3	247.3	200.1	187.4
37.5°	353.0	304.7	224.1	178.4	166.4
40°	336.5	283.7	202.0	158.1	147.3
42.5°	318.9	262.7	180.6	139.0	130.8
45°	301.3	241.7	160.8	124.0	119.9
47.5°	283.7	220.4	142.0	113.6	109.8
50°	265.3	199.7	124.4	103.8	100.1
52.5°	247.3	179.5	109.8	94.4	91.8
55°	229.7	159.6	98.9	84.3	82.4
57.5°	211.4	140.2	88.1	76.5	74.2
60°	191.9	121.4	77.9	68.2	67.1
62.5°	174.3	103.8	69.0	61.1	60.0
65°	155.5	86.2	60.3	54.0	53.2
67.5°	136.4	71.6	52.5	47.2	46.8
70°	117.3	60.3	45.0	40.8	40.5
72.5°	98.6	49.8	37.9	35.2	34.5
75°	79.4	39.7	31.5	29.2	28.9
77.5°	62.2	30.7	25.1	23.6	23.2
80°	45.7	22.9	19.5	18.4	18.0
82.5°	30.0	15.7	13.9	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	16.81	18.30	17.17	18.61	18.93	11.96	13.45	12.32	13.77	14.08
	3H	18.69	20.03	19.07	20.36	20.72	13.58	14.92	13.96	15.25	15.61
	4H	19.45	20.71	19.85	21.05	21.43	14.22	15.48	14.62	15.83	16.21
	6H	20.01	21.17	20.43	21.54	21.93	14.71	15.87	15.12	16.24	16.63
	8H	20.19	21.29	20.61	21.68	22.08	14.88	15.98	15.31	16.37	16.78
	12H	20.28	21.34	20.71	21.72	22.15	15.00	16.06	15.44	16.44	16.87
4H	2H	16.85	18.11	17.25	18.46	18.84	12.69	13.94	13.09	14.29	14.67
	3H	18.87	19.91	19.28	20.31	20.72	14.51	15.55	14.92	15.95	16.35
	4H	19.69	20.63	20.12	21.04	21.48	15.25	16.19	15.68	16.61	17.05
	6H	20.37	21.19	20.83	21.63	22.09	15.86	16.68	16.32	17.12	17.58
	8H	20.60	21.36	21.06	21.81	22.28	16.07	16.84	16.54	17.28	17.75
	12H	20.75	21.43	21.23	21.91	22.38	16.24	16.92	16.72	17.40	17.87
8H	4H	19.71	20.48	20.18	20.92	21.39	15.63	16.40	16.10	16.84	17.31
	6H	20.44	21.07	20.94	21.56	22.04	16.36	16.99	16.86	17.49	17.96
	8H	20.71	21.28	21.22	21.79	22.27	16.65	17.22	17.17	17.73	18.22
	12H	20.92	21.42	21.43	21.91	22.48	16.89	17.39	17.40	17.89	18.45
12H	4H	19.70	20.38	20.18	20.86	21.33	15.69	16.37	16.17	16.85	17.32
	6H	20.42	20.99	20.94	21.50	21.99	16.45	17.01	16.96	17.52	18.01
	8H	20.73	21.23	21.24	21.72	22.29	16.79	17.29	17.30	17.79	18.35