

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: P1055806

Luminaire Tested: S123R3DR-H775D930-X4F0-XX-UDD-F-B

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055806
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-H775D930-X4F0-XX-UDD-F-B
Description: DEFINE 3, BLACK 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

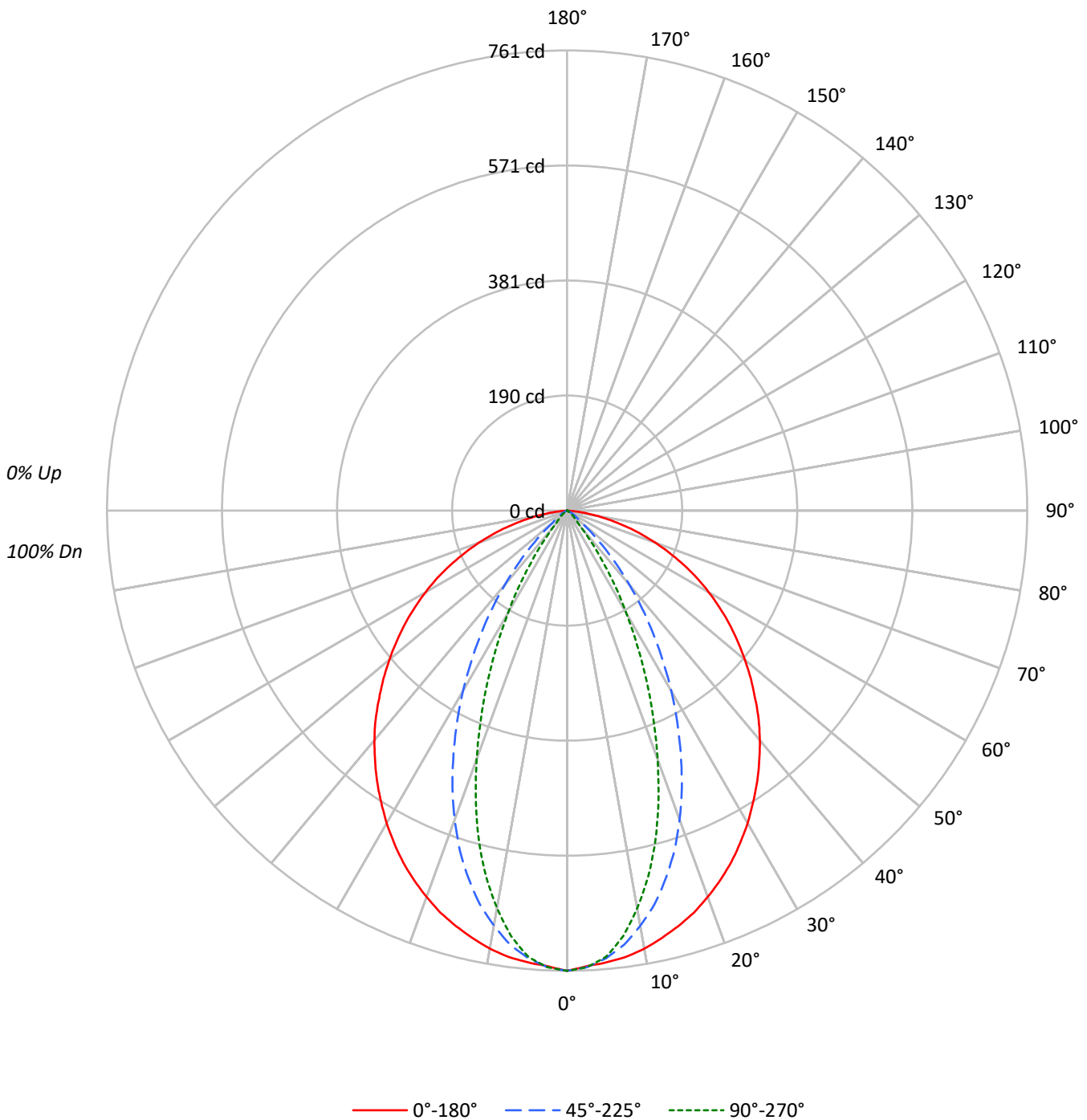
Lumens per Lamp: N/A
Luminaire Lumens: 890.8 lumens
Efficiency: N/A
Efficacy: 37.4 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.7 / 0.86
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 23.8
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	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	57	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°	9176	9176	9176
5°	9077	8991	8963
10°	9008	8534	8177
15°	8878	7863	7046
20°	8722	6980	5612
25°	8539	5913	4138
30°	8310	4792	2715
35°	8064	3649	1488
40°	7803	2523	510
45°	7499	1468	297
50°	7197	578	178
55°	6886	366	82
60°	6530	229	39
65°	6082	111	23
70°	5453	56	28
75°	4635	37	37
80°	3451	56	0
85°	1314	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7499 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.8	7.8
10°-20°	177.1	19.9
20°-30°	211.2	23.7
30°-40°	179.2	20.1
40°-50°	121.8	13.7
50°-60°	75.5	8.5
60°-70°	38.2	4.3
70°-80°	15.6	1.8
80°-90°	2.4	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°	458.1	51.4
0°-40°	637.3	71.5
0°-60°	834.6	93.7
0°-90°	890.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	890.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	761	761	761	761	761	
5°	750	757	743	737	741	71
15°	711	693	630	580	564	200
25°	642	582	444	343	311	295
35°	548	440	248	133	101	342
45°	440	288	86	21	17	340
55°	328	145	17	6	4	293
65°	213	36	4	1	1	211
75°	100	6	1	1	1	106
85°	10	0	0	1	0	17
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	761.1	761.1	761.1	761.1	761.1
2.5°	754.0	764.2	755.6	754.8	755.6
5°	750.0	757.1	742.9	737.4	740.6
7.5°	744.5	747.7	724.0	709.8	709.8
10°	735.8	733.5	697.1	673.5	667.9
12.5°	724.0	714.5	667.1	630.0	619.8
15°	711.3	693.2	630.0	580.3	564.5
17.5°	697.1	669.5	589.8	525.0	502.1
20°	679.8	642.7	544.0	465.0	437.4
22.5°	661.6	613.4	495.8	403.4	372.6
25°	641.9	581.9	444.5	343.4	311.1
27.5°	619.8	548.7	394.0	285.8	250.3
30°	596.9	514.0	344.2	230.5	195.0
32.5°	572.4	477.7	294.5	180.0	146.8
35°	547.9	439.8	247.9	133.4	101.1
37.5°	521.9	401.9	202.9	92.4	64.0
40°	495.8	364.8	160.3	58.4	32.4
42.5°	469.0	326.1	121.6	29.2	22.1
45°	439.8	288.2	86.1	21.3	17.4
47.5°	412.1	251.9	56.8	17.4	13.4
50°	383.7	215.5	30.8	12.6	9.5
52.5°	355.3	180.8	22.1	9.5	6.3
55°	327.6	145.3	17.4	6.3	3.9
57.5°	299.2	114.5	13.4	3.9	2.4
60°	270.8	84.5	9.5	2.4	1.6
62.5°	242.4	58.4	6.3	1.6	0.8
65°	213.2	35.5	3.9	0.8	0.8
67.5°	183.2	24.5	2.4	0.8	0.8
70°	154.7	17.4	1.6	0.8	0.8
72.5°	126.3	11.1	0.8	0.8	0.0
75°	99.5	6.3	0.8	0.8	0.8
77.5°	73.4	2.4	0.8	0.8	0.0
80°	49.7	0.8	0.8	0.8	0.0
82.5°	27.6	0.0	0.8	0.8	0.0
85°	9.5	0.0	0.0	0.8	0.0
87.5°	0.0	0.0	0.0	0.8	0.0
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	16.75	18.03	17.11	18.34	18.66	0.00	0.00	0.00	0.00	0.00
	3H	18.69	19.83	19.07	20.16	20.52	0.00	0.00	0.00	0.00	0.00
	4H	19.52	20.58	19.93	20.93	21.31	0.00	0.00	0.00	0.00	0.00
	6H	20.08	21.04	20.49	21.42	21.81	0.00	0.00	0.00	0.00	0.00
	8H	20.20	21.12	20.63	21.51	21.91	0.00	0.00	0.00	0.00	0.00
	12H	20.22	21.10	20.66	21.48	21.91	0.00	0.00	0.00	0.00	0.00
4H	2H	16.51	17.57	16.92	17.92	18.30	0.00	0.00	0.00	0.00	0.00
	3H	18.47	19.33	18.88	19.73	20.14	0.00	0.00	0.00	0.00	0.00
	4H	19.28	20.05	19.72	20.47	20.91	0.00	0.00	0.00	0.00	0.00
	6H	19.88	20.54	20.34	20.99	21.46	0.00	0.00	0.00	0.00	0.00
	8H	20.03	20.65	20.50	21.10	21.57	0.00	0.00	0.00	0.00	0.00
	12H	20.08	20.62	20.57	21.11	21.58	0.00	0.00	0.00	0.00	0.00
8H	4H	19.14	19.76	19.61	20.20	20.67	0.00	0.00	0.00	0.00	0.00
	6H	19.72	20.22	20.22	20.72	21.20	0.00	0.00	0.00	0.00	0.00
	8H	19.87	20.32	20.39	20.83	21.33	0.00	0.00	0.00	0.00	0.00
	12H	19.93	20.32	20.44	20.82	21.39	0.00	0.00	0.00	0.00	0.00
12H	4H	19.09	19.63	19.58	20.12	20.59	0.00	0.00	0.00	0.00	0.00
	6H	19.66	20.11	20.18	20.62	21.11	0.00	0.00	0.00	0.00	0.00
	8H	19.82	20.22	20.34	20.71	21.29	0.00	0.00	0.00	0.00	0.00