

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: P1055810

Luminaire Tested: S123R3DR-H775D935-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055810
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-6)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-H775D935-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

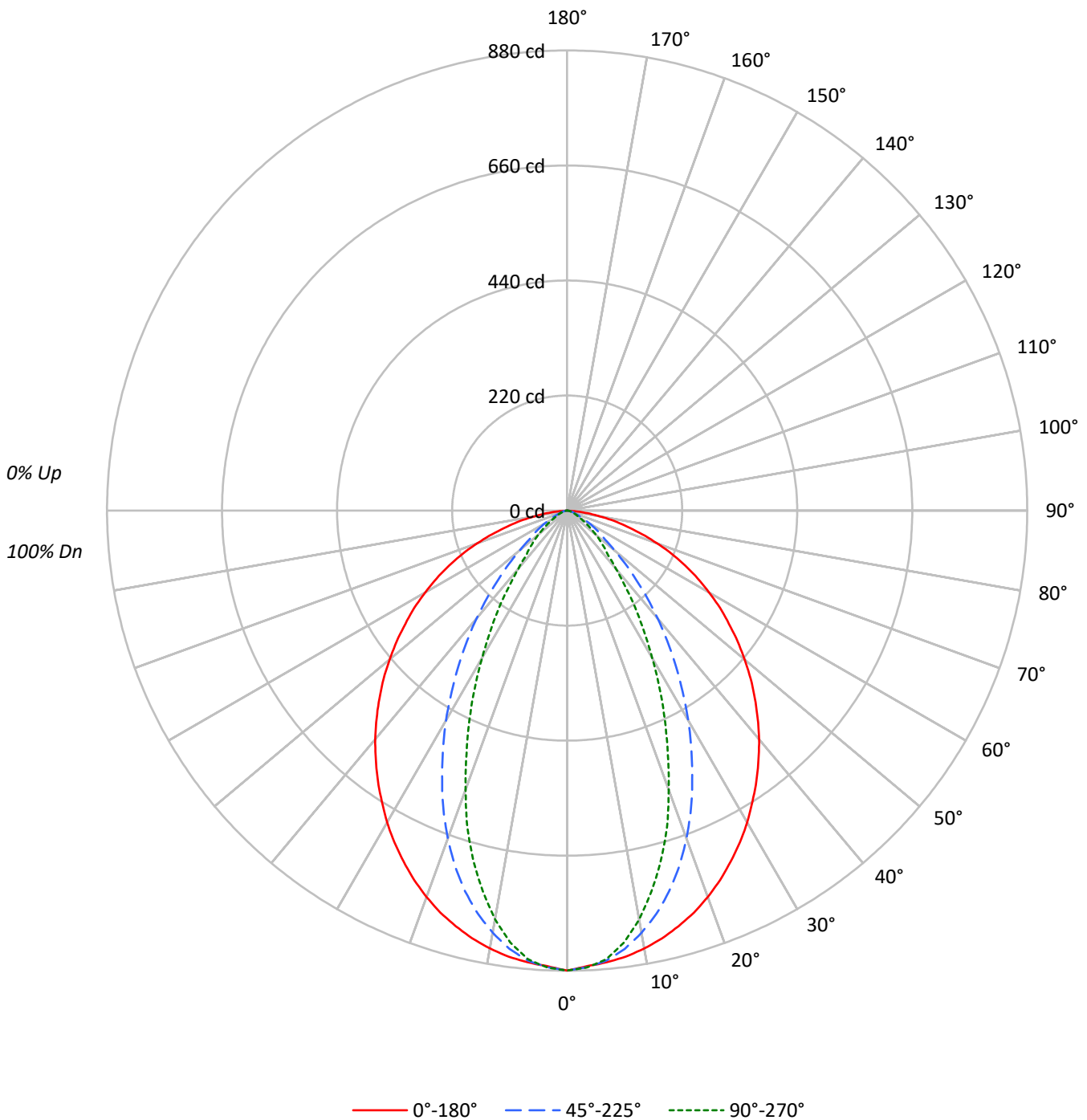
Lumens per Lamp: N/A
Luminaire Lumens: 1223.3 lumens
Efficiency: N/A
Efficacy: 51.4 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10605	10605	10605
5°	10494	10454	10424
10°	10411	10034	9717
15°	10271	9407	8649
20°	10087	8558	7285
25°	9849	7531	5878
30°	9588	6454	4527
35°	9290	5326	3350
40°	8988	4238	2284
45°	8658	3170	1720
50°	8303	2206	1345
55°	7939	1612	982
60°	7559	1206	704
65°	7112	807	548
70°	6437	589	441
75°	5553	429	349
80°	4457	347	292
85°	2310	346	235

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 8658 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.3	6.6
10°-20°	211.7	17.3
20°-30°	265.9	21.7
30°-40°	247.7	20.2
40°-50°	189.6	15.5
50°-60°	126.0	10.3
60°-70°	67.9	5.6
70°-80°	27.8	2.3
80°-90°	5.3	0.4
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°	558.9	45.7
0°-40°	806.6	65.9
0°-60°	1122.2	91.7
0°-90°	1223.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1223.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	880	880	880	880	880	
5°	867	876	864	860	861	82
15°	823	810	754	710	693	232
25°	740	690	566	472	442	341
35°	631	538	362	256	228	395
45°	508	375	186	109	101	392
55°	378	218	77	53	47	338
65°	249	84	28	21	19	246
75°	119	20	9	8	8	128
85°	17	2	2	2	2	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	879.6	879.6	879.6	879.6	879.6
2.5°	872.1	883.0	873.8	874.6	874.6
5°	867.1	876.3	863.8	860.4	861.3
7.5°	860.4	866.3	845.4	834.6	832.9
10°	850.4	852.1	819.6	800.4	793.7
12.5°	837.9	832.1	789.6	757.9	745.4
15°	822.9	809.6	753.7	709.5	692.9
17.5°	806.2	783.7	712.9	655.3	635.3
20°	786.2	754.6	667.0	595.3	567.8
22.5°	764.6	723.7	618.7	533.6	502.8
25°	740.4	690.4	566.1	471.9	441.9
27.5°	715.4	654.5	514.4	413.5	382.7
30°	688.7	617.8	463.6	356.9	325.2
32.5°	659.5	577.8	411.0	304.3	272.6
35°	631.2	537.8	361.9	256.0	227.6
37.5°	601.1	497.8	314.3	213.4	181.8
40°	571.1	456.9	269.3	171.8	145.1
42.5°	539.4	416.0	226.8	136.7	115.9
45°	507.8	375.2	185.9	109.2	100.9
47.5°	476.1	334.3	150.1	94.2	85.9
50°	442.7	295.2	117.6	80.0	71.7
52.5°	411.0	256.0	91.7	65.9	58.4
55°	377.7	218.4	76.7	53.4	46.7
57.5°	346.8	180.1	63.4	41.7	36.7
60°	313.5	145.9	50.0	32.5	29.2
62.5°	281.8	114.2	38.4	25.8	23.3
65°	249.3	84.2	28.3	20.8	19.2
67.5°	216.8	60.9	21.7	16.7	15.8
70°	182.6	45.9	16.7	13.3	12.5
72.5°	150.1	32.5	12.5	10.8	10.0
75°	119.2	20.0	9.2	8.3	7.5
77.5°	91.7	11.7	6.7	6.7	5.8
80°	64.2	6.7	5.0	5.0	4.2
82.5°	39.2	4.2	3.3	3.3	3.3
85°	16.7	2.5	2.5	2.5	1.7
87.5°	2.5	0.8	0.8	0.8	0.8
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	18.02	19.37	18.38	19.69	20.00	6.59	7.95	6.96	8.26	8.58
	3H	19.77	20.98	20.15	21.31	21.67	7.25	8.46	7.63	8.79	9.15
	4H	20.47	21.59	20.87	21.94	22.33	7.45	8.57	7.85	8.92	9.31
	6H	20.98	22.02	21.40	22.39	22.78	7.57	8.60	7.98	8.97	9.37
	8H	21.12	22.10	21.55	22.49	22.90	7.60	8.58	8.03	8.97	9.38
	12H	21.17	22.11	21.61	22.49	22.92	7.61	8.55	8.05	8.93	9.36
4H	2H	17.83	18.95	18.23	19.30	19.68	7.15	8.27	7.55	8.62	9.00
	3H	19.62	20.54	20.03	20.94	21.35	7.94	8.86	8.36	9.27	9.67
	4H	20.31	21.14	20.75	21.55	22.00	8.20	9.02	8.63	9.44	9.88
	6H	20.88	21.59	21.35	22.04	22.50	8.40	9.11	8.86	9.55	10.02
	8H	21.06	21.72	21.53	22.17	22.64	8.45	9.11	8.92	9.56	10.03
	12H	21.14	21.73	21.63	22.21	22.69	8.48	9.07	8.97	9.55	10.03
8H	4H	20.19	20.85	20.66	21.30	21.77	8.52	9.18	8.98	9.62	10.10
	6H	20.74	21.29	21.25	21.78	22.26	8.76	9.30	9.26	9.80	10.28
	8H	20.92	21.41	21.44	21.92	22.41	8.85	9.34	9.37	9.85	10.34
	12H	21.03	21.45	21.54	21.95	22.52	8.93	9.36	9.44	9.85	10.42
12H	4H	20.15	20.73	20.63	21.22	21.69	8.56	9.15	9.05	9.63	10.10
	6H	20.69	21.17	21.21	21.69	22.18	8.81	9.30	9.33	9.81	10.30
	8H	20.88	21.31	21.39	21.80	22.37	8.93	9.36	9.45	9.86	10.43