

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: P1055657

Luminaire Tested: S123R3DR-S775D830-X4F0-XX-UDD-F-S

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055657
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-S775D830-X4F0-XX-UDD-F-S
Description: DEFINE 3, SILVER 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

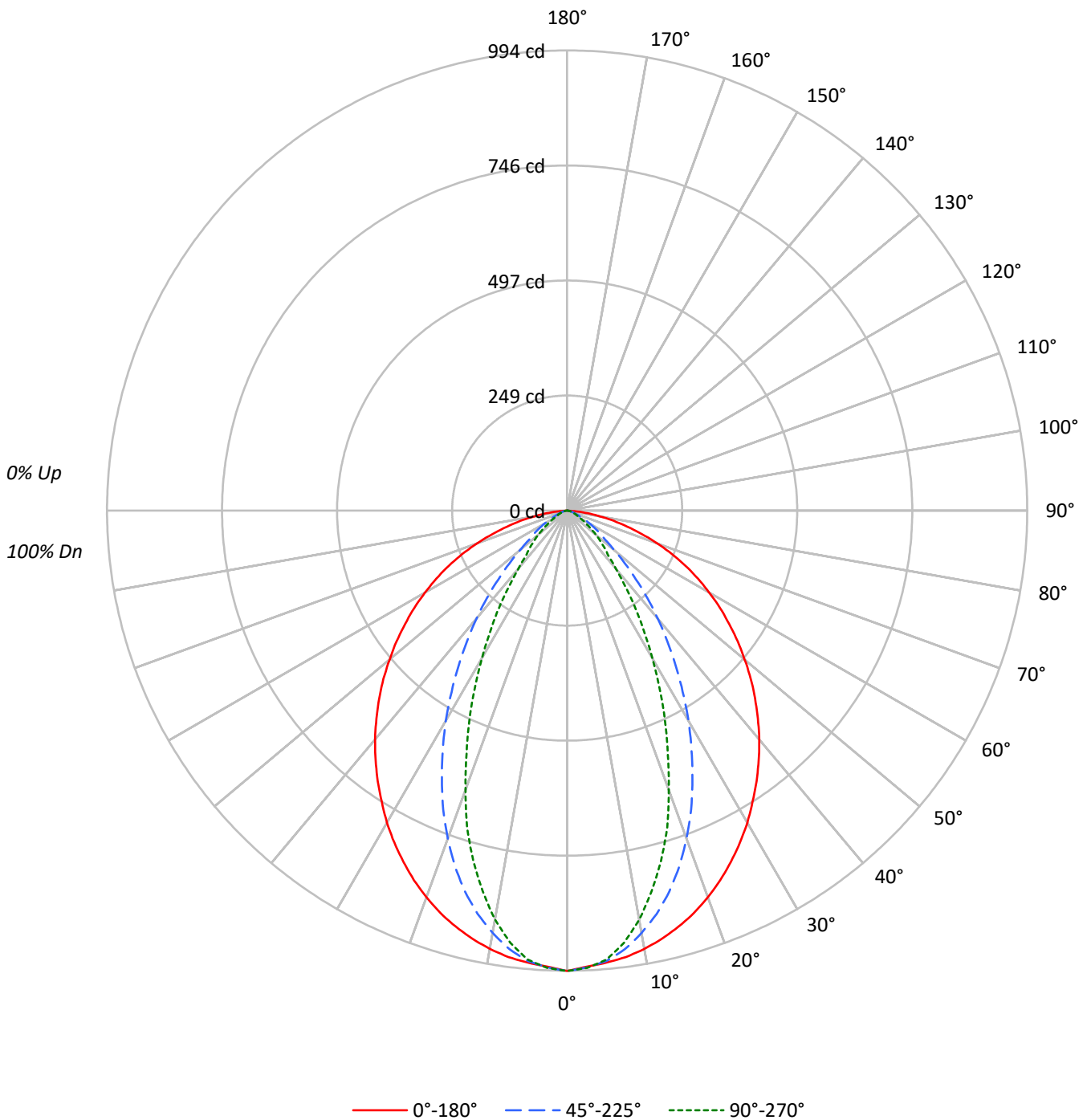
Lumens per Lamp: N/A
Luminaire Lumens: 1382.9 lumens
Efficiency: N/A
Efficacy: 52.4 lumens/watt
Spacing Criteria (0/90/45): 1.17 / 0.77 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
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	111	108	104	102	109	106	103	100	101	99	97	98	96	94	94	93	91	89					89			
2	104	97	92	87	101	95	90	86	92	88	84	89	85	82	86	83	81	79					79			
3	96	88	81	76	94	86	80	76	84	78	74	81	77	73	79	75	72	70					70			
4	90	80	73	67	88	79	72	67	76	71	66	74	69	65	72	68	64	62					62			
5	84	73	66	60	82	72	65	60	70	64	59	68	63	59	67	62	58	56					56			
6	78	67	60	54	77	66	59	54	65	58	53	63	57	53	62	57	53	51					51			
7	73	62	54	49	72	61	54	49	60	53	49	58	53	48	57	52	48	46					46			
8	69	57	50	45	68	57	50	45	56	49	45	54	49	44	53	48	44	42					42			
9	65	53	46	41	64	53	46	41	52	45	41	51	45	41	50	45	41	39					39			
10	62	50	43	38	60	49	43	38	48	42	38	48	42	38	47	42	38	36					36			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11989	11989	11989
5°	11863	11818	11783
10°	11770	11343	10985
15°	11612	10636	9777
20°	11403	9674	8236
25°	11134	8514	6645
30°	10838	7296	5118
35°	10501	6021	3787
40°	10161	4791	2581
45°	9787	3584	1944
50°	9388	2493	1521
55°	8975	1822	1110
60°	8546	1365	796
65°	8039	913	619
70°	7276	666	497
75°	6279	484	396
80°	5041	396	326
85°	2614	387	263

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9787 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.9	6.6
10°-20°	239.3	17.3
20°-30°	300.6	21.7
30°-40°	280.0	20.2
40°-50°	214.3	15.5
50°-60°	142.5	10.3
60°-70°	76.8	5.6
70°-80°	31.5	2.3
80°-90°	6.0	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°	631.8	45.7
0°-40°	911.8	65.9
0°-60°	1268.6	91.7
0°-90°	1382.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1382.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	994	994	994	994	994	
5°	980	991	976	973	974	93
15°	930	915	852	802	783	262
25°	837	780	640	534	500	385
35°	714	608	409	289	257	446
45°	574	424	210	124	114	443
55°	427	247	87	60	53	383
65°	282	95	32	24	22	278
75°	135	23	10	9	8	144
85°	19	3	3	3	2	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	994.4	994.4	994.4	994.4	994.4
2.5°	985.9	998.2	987.8	988.7	988.7
5°	980.2	990.6	976.5	972.7	973.6
7.5°	972.7	979.3	955.7	943.5	941.6
10°	961.4	963.3	926.5	904.8	897.3
12.5°	947.3	940.7	892.6	856.8	842.6
15°	930.3	915.2	852.1	802.1	783.3
17.5°	911.4	886.0	805.9	740.8	718.2
20°	888.8	853.0	754.0	673.0	641.9
22.5°	864.3	818.1	699.4	603.2	568.4
25°	837.0	780.4	640.0	533.5	499.5
27.5°	808.7	739.9	581.5	467.5	432.6
30°	778.5	698.4	524.1	403.4	367.6
32.5°	745.5	653.2	464.7	344.0	308.2
35°	713.5	607.9	409.1	289.4	257.3
37.5°	679.6	562.7	355.3	241.3	205.5
40°	645.6	516.5	304.4	194.2	164.0
42.5°	609.8	470.3	256.4	154.6	131.0
45°	574.0	424.1	210.2	123.5	114.0
47.5°	538.2	378.0	169.7	106.5	97.1
50°	500.5	333.7	132.9	90.5	81.1
52.5°	464.7	289.4	103.7	74.5	66.0
55°	427.0	246.9	86.7	60.3	52.8
57.5°	392.1	203.6	71.6	47.1	41.5
60°	354.4	164.9	56.6	36.8	33.0
62.5°	318.6	129.1	43.4	29.2	26.4
65°	281.8	95.2	32.0	23.6	21.7
67.5°	245.1	68.8	24.5	18.9	17.9
70°	206.4	51.8	18.9	15.1	14.1
72.5°	169.7	36.8	14.1	12.3	11.3
75°	134.8	22.6	10.4	9.4	8.5
77.5°	103.7	13.2	7.5	7.5	6.6
80°	72.6	7.5	5.7	5.7	4.7
82.5°	44.3	4.7	3.8	3.8	3.8
85°	18.9	2.8	2.8	2.8	1.9
87.5°	2.8	0.9	0.9	0.9	0.9
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	18.44	19.80	18.81	20.11	20.43	7.01	8.37	7.38	8.68	9.00
	3H	20.20	21.40	20.58	21.73	22.10	7.68	8.88	8.06	9.21	9.58
	4H	20.90	22.02	21.30	22.37	22.75	7.88	9.00	8.28	9.35	9.73
	6H	21.41	22.44	21.82	22.81	23.21	8.00	9.03	8.41	9.40	9.79
	8H	21.55	22.53	21.98	22.92	23.32	8.03	9.01	8.46	9.40	9.81
	12H	21.60	22.54	22.03	22.92	23.35	8.04	8.98	8.47	9.36	9.79
4H	2H	18.25	19.38	18.65	19.73	20.11	7.57	8.69	7.97	9.04	9.43
	3H	20.04	20.96	20.46	21.37	21.77	8.37	9.29	8.78	9.69	10.10
	4H	20.74	21.56	21.17	21.98	22.42	8.63	9.45	9.06	9.87	10.31
	6H	21.31	22.02	21.77	22.47	22.93	8.83	9.54	9.29	9.98	10.45
	8H	21.48	22.15	21.95	22.59	23.06	8.88	9.54	9.35	9.99	10.46
	12H	21.57	22.16	22.06	22.64	23.11	8.91	9.50	9.40	9.98	10.46
8H	4H	20.62	21.28	21.08	21.72	22.20	8.94	9.60	9.41	10.05	10.52
	6H	21.17	21.71	21.67	22.21	22.69	9.19	9.73	9.69	10.23	10.71
	8H	21.35	21.83	21.87	22.35	22.84	9.28	9.77	9.80	10.28	10.77
	12H	21.45	21.88	21.96	22.37	22.94	9.36	9.79	9.88	10.28	10.85
12H	4H	20.57	21.16	21.06	21.64	22.11	8.99	9.57	9.47	10.06	10.53
	6H	21.11	21.60	21.63	22.11	22.60	9.24	9.72	9.76	10.24	10.73
	8H	21.31	21.73	21.82	22.23	22.80	9.37	9.79	9.88	10.29	10.86