

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059432

Luminaire Tested: S123RDR-H1000D840-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059432
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1000D840-X4F0-XX-UDD-SVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

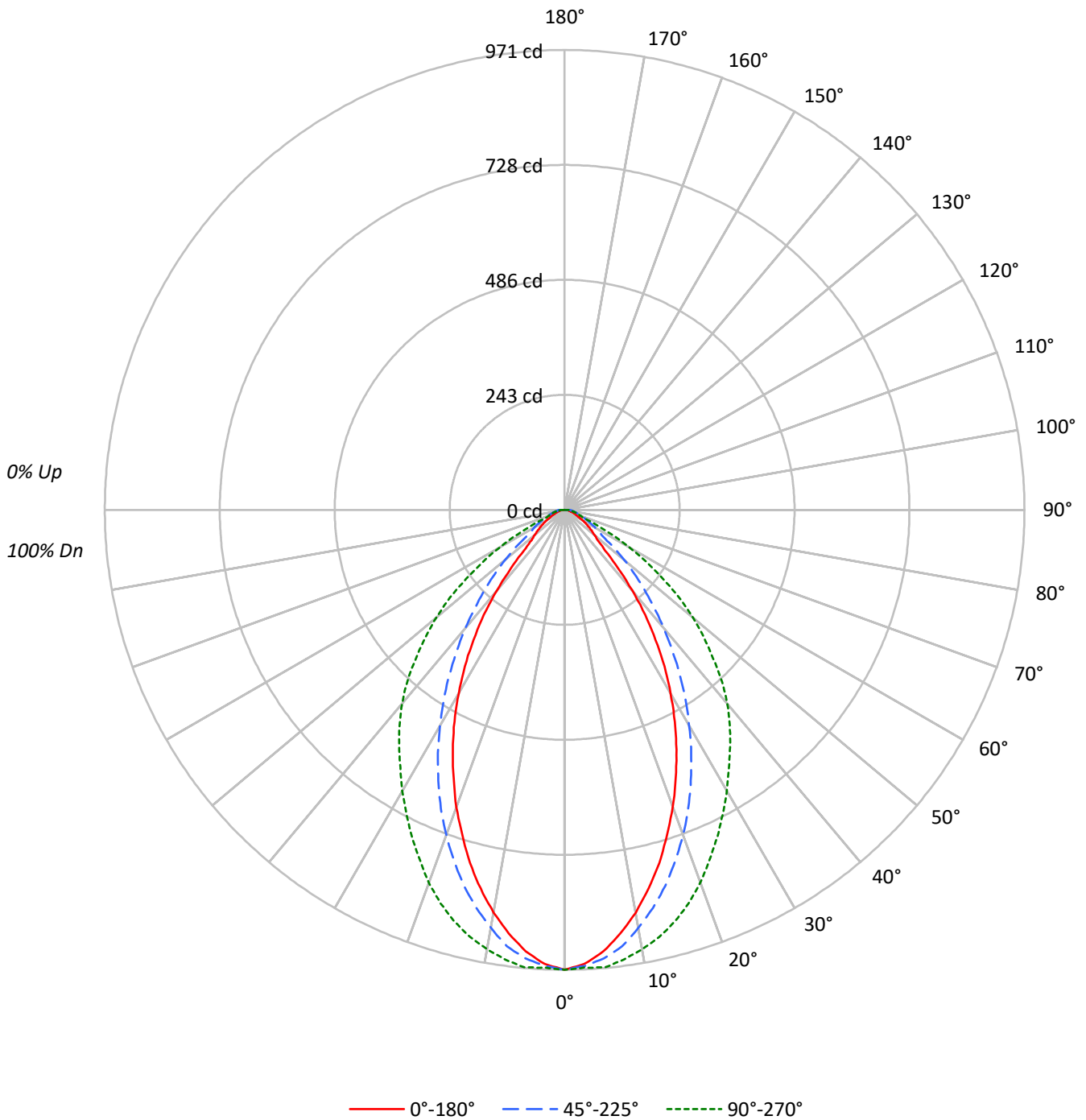
Lumens per Lamp: N/A
Luminaire Lumens: 1303.4 lumens
Efficiency: N/A
Efficacy: 41.8 lumens/watt
Spacing Criteria (0/90/45): 0.83 / 1.08 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.2
Input Voltage (V): 120
Input Current (Ain): 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	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11401	11401	11401
5°	11032	11203	11430
10°	10297	10685	11232
15°	9384	9984	10937
20°	8350	9133	10474
25°	7235	8173	9875
30°	6068	7131	9289
35°	4806	6068	8731
40°	3401	4991	8190
45°	2003	3946	7370
50°	1498	2996	6456
55°	1259	2025	5186
60°	1019	1728	3682
65°	803	1475	1945
70°	704	1284	1202
75°	658	1202	1148
80°	649	1305	1143
85°	808	1954	1469

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 7370 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.3	6.9
10°-20°	232.2	17.8
20°-30°	295.7	22.7
30°-40°	278.2	21.3
40°-50°	200.3	15.4
50°-60°	115.7	8.9
60°-70°	52.9	4.1
70°-80°	26.4	2.0
80°-90°	12.5	1.0
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°	617.3	47.4
0°-40°	895.5	68.7
0°-60°	1211.5	93.0
0°-90°	1303.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1303.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	971	971	971	971	971	
5°	936	952	950	960	970	87
15°	772	800	821	867	900	215
25°	558	587	631	701	762	255
35°	335	364	423	521	609	208
45°	121	151	238	357	444	102
55°	62	64	99	188	253	55
65°	29	41	53	59	70	30
75°	14	28	26	25	25	15
85°	6	13	14	13	11	7
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	970.9	970.9	970.9	970.9	970.9
2.5°	960.0	972.1	963.7	964.9	967.3
5°	935.9	951.6	950.4	960.0	969.7
7.5°	902.1	920.2	929.9	944.4	957.6
10°	863.6	884.1	896.1	922.7	942.0
12.5°	818.9	845.5	861.1	896.1	923.9
15°	771.9	799.6	821.3	867.2	899.7
17.5°	718.8	749.0	776.7	831.0	870.8
20°	668.2	697.1	730.9	790.0	838.2
22.5°	612.7	644.0	682.6	745.4	799.6
25°	558.4	587.4	630.8	700.7	762.2
27.5°	504.1	533.1	578.9	656.1	723.6
30°	447.5	477.6	525.9	611.5	685.1
32.5°	392.0	420.9	475.2	568.1	645.3
35°	335.3	364.2	423.3	521.0	609.1
37.5°	279.8	310.0	372.7	482.4	572.9
40°	221.9	254.5	325.6	442.6	534.3
42.5°	167.6	202.6	278.6	401.6	492.1
45°	120.6	150.8	237.6	357.0	443.8
47.5°	94.1	109.8	200.2	311.2	399.2
50°	82.0	84.4	164.0	269.0	353.4
52.5°	71.2	73.6	129.1	229.2	305.1
55°	61.5	63.9	98.9	188.1	253.3
57.5°	51.9	55.5	82.0	149.6	203.8
60°	43.4	48.2	73.6	114.6	156.8
62.5°	35.0	43.4	62.7	84.4	112.2
65°	28.9	41.0	53.1	59.1	70.0
67.5°	24.1	37.4	44.6	42.2	41.0
70°	20.5	33.8	37.4	33.8	35.0
72.5°	16.9	31.4	31.4	28.9	28.9
75°	14.5	27.7	26.5	25.3	25.3
77.5°	12.1	24.1	22.9	21.7	20.5
80°	9.6	19.3	19.3	18.1	16.9
82.5°	8.4	15.7	15.7	15.7	13.3
85°	6.0	13.3	14.5	13.3	10.9
87.5°	4.8	12.1	12.1	10.9	7.2
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	8.43	9.75	8.79	10.06	10.38	15.79	17.11	16.16	17.42	17.74
	3H	9.82	10.99	10.20	11.32	11.68	16.02	17.19	16.40	17.52	17.89
	4H	10.37	11.46	10.77	11.81	12.19	16.14	17.23	16.54	17.58	17.96
	6H	10.80	11.81	11.22	12.18	12.57	16.25	17.25	16.66	17.62	18.02
	8H	10.98	11.93	11.41	12.32	12.72	16.30	17.25	16.73	17.64	18.05
	12H	11.13	12.04	11.57	12.42	12.85	16.36	17.27	16.79	17.65	18.08
4H	2H	9.53	10.62	9.93	10.97	11.35	15.75	16.84	16.15	17.19	17.57
	3H	11.19	12.08	11.60	12.49	12.89	16.11	17.00	16.52	17.41	17.81
	4H	12.00	12.80	12.44	13.22	13.66	16.30	17.10	16.74	17.52	17.97
	6H	12.63	13.33	13.10	13.77	14.24	16.53	17.22	16.99	17.67	18.14
	8H	12.87	13.51	13.34	13.96	14.43	16.64	17.28	17.11	17.73	18.20
	12H	13.08	13.65	13.57	14.14	14.61	16.77	17.34	17.25	17.82	18.29
8H	4H	12.44	13.09	12.91	13.53	14.01	16.34	16.99	16.81	17.44	17.91
	6H	13.35	13.88	13.85	14.38	14.86	16.67	17.20	17.17	17.70	18.18
	8H	13.77	14.25	14.29	14.76	15.25	16.86	17.34	17.38	17.85	18.34
	12H	14.19	14.61	14.70	15.11	15.68	17.11	17.53	17.63	18.03	18.60
12H	4H	12.50	13.07	12.98	13.55	14.03	16.33	16.90	16.82	17.39	17.86
	6H	13.49	13.96	14.01	14.48	14.97	16.69	17.16	17.21	17.68	18.17
	8H	14.03	14.45	14.54	14.94	15.51	16.94	17.37	17.46	17.86	18.43