

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: P1059415

Luminaire Tested: S123RDR-H1000D830-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059415
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1000D830-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

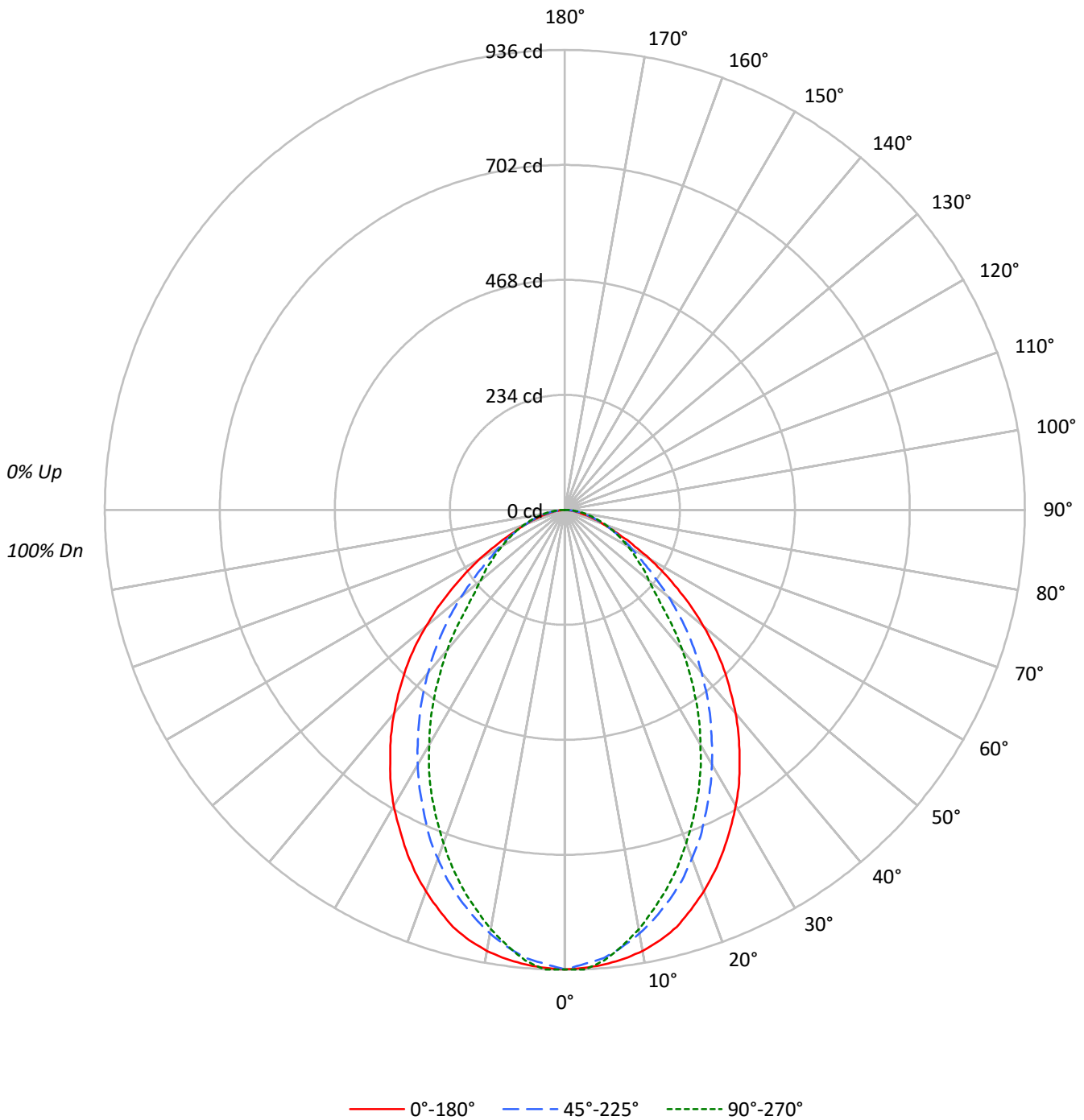
Lumens per Lamp: N/A
Luminaire Lumens: 1635.9 lumens
Efficiency: N/A
Efficacy: 52.4 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P1059415

CATALOG NUMBER: S123RDR-H1000D830-X4F0-XX-UDD-WVL-B

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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88				
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76				
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66				
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58				
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52				
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47				
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42				
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38				
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35				
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10983	10983	10983
5°	10946	10787	10853
10°	10871	10441	10335
15°	10687	9990	9717
20°	10325	9441	9018
25°	9905	8797	8302
30°	9436	8125	7485
35°	8879	7397	6623
40°	8288	6634	5704
45°	7597	5862	4686
50°	6735	5031	4066
55°	5730	4211	3728
60°	4673	3671	3459
65°	3562	3248	3217
70°	2778	2894	3011
75°	2246	2600	2804
80°	1670	2130	2583
85°	903	1361	2277

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 7597 cd/sqm

TEST NUMBER: P1059415

CATALOG NUMBER: S123RDR-H1000D830-X4F0-XX-UDD-WVL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.8	5.3
10°-20°	233.6	14.3
20°-30°	317.6	19.4
30°-40°	329.2	20.1
40°-50°	277.6	17.0
50°-60°	197.1	12.0
60°-70°	120.5	7.4
70°-80°	59.9	3.7
80°-90°	13.6	0.8
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°	638.0	39.0
0°-40°	967.2	59.1
0°-60°	1441.9	88.1
0°-90°	1635.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1635.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	935	935	935	935	935	
5°	929	929	915	921	921	88
15°	879	862	822	807	799	247
25°	764	731	679	654	641	351
35°	619	572	516	480	462	387
45°	458	409	353	305	282	351
55°	280	251	206	188	182	251
65°	128	124	117	117	116	131
75°	50	53	57	60	62	53
85°	7	8	10	15	17	9
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	935.3	935.3	935.3	935.3	935.3
2.5°	933.1	934.2	925.2	935.3	936.5
5°	928.6	928.6	915.1	920.7	920.7
7.5°	921.8	919.6	897.1	897.1	894.9
10°	911.7	905.0	875.7	870.1	866.8
12.5°	897.1	885.9	849.9	839.8	833.0
15°	879.1	862.3	821.8	807.2	799.3
17.5°	853.3	836.4	791.4	771.2	762.2
20°	826.3	801.5	755.5	735.2	721.7
22.5°	797.1	765.6	720.6	695.9	681.3
25°	764.5	730.7	679.0	654.3	640.8
27.5°	729.6	692.5	639.7	611.6	598.1
30°	695.9	653.2	599.2	567.7	552.0
32.5°	659.9	611.6	556.5	523.9	508.1
35°	619.4	572.2	516.0	480.0	462.0
37.5°	581.2	532.9	474.4	436.2	416.0
40°	540.7	492.4	432.8	393.5	372.1
42.5°	498.0	451.9	393.5	347.4	327.1
45°	457.5	409.2	353.0	304.7	282.2
47.5°	413.7	368.7	313.6	264.2	248.4
50°	368.7	327.1	275.4	230.5	222.6
52.5°	324.9	290.0	237.2	208.0	204.6
55°	279.9	250.7	205.7	187.7	182.1
57.5°	238.3	217.0	176.5	167.5	165.3
60°	199.0	181.0	156.3	150.6	147.3
62.5°	160.8	150.6	136.0	133.8	131.5
65°	128.2	123.7	116.9	116.9	115.8
67.5°	101.2	101.2	100.1	102.3	101.2
70°	80.9	82.1	84.3	86.6	87.7
72.5°	64.1	67.5	69.7	73.1	74.2
75°	49.5	52.8	57.3	59.6	61.8
77.5°	36.0	39.3	43.8	47.2	49.5
80°	24.7	27.0	31.5	36.0	38.2
82.5°	15.7	16.9	20.2	24.7	27.0
85°	6.7	7.9	10.1	14.6	16.9
87.5°	0.0	0.0	1.1	4.5	7.9
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	17.14	18.59	17.50	18.90	19.21	15.23	16.68	15.60	16.99	17.31
	3H	18.03	19.33	18.41	19.66	20.02	16.81	18.10	17.18	18.43	18.79
	4H	18.32	19.53	18.72	19.88	20.26	17.40	18.61	17.80	18.96	19.34
	6H	18.46	19.58	18.88	19.95	20.34	17.85	18.97	18.26	19.34	19.73
	8H	18.49	19.55	18.92	19.94	20.34	18.00	19.06	18.43	19.45	19.86
	12H	18.48	19.50	18.91	19.88	20.31	18.10	19.12	18.53	19.50	19.93
4H	2H	17.38	18.59	17.78	18.94	19.32	15.77	16.98	16.17	17.33	17.71
	3H	18.49	19.49	18.90	19.89	20.30	17.55	18.55	17.96	18.95	19.35
	4H	18.88	19.78	19.32	20.20	20.64	18.26	19.16	18.69	19.57	20.01
	6H	19.12	19.90	19.58	20.35	20.81	18.83	19.61	19.29	20.05	20.52
	8H	19.17	19.89	19.63	20.34	20.81	19.02	19.75	19.49	20.19	20.66
	12H	19.18	19.82	19.66	20.30	20.77	19.16	19.81	19.64	20.29	20.76
8H	4H	19.04	19.77	19.51	20.21	20.68	18.47	19.20	18.93	19.64	20.11
	6H	19.35	19.95	19.85	20.44	20.92	19.14	19.74	19.64	20.24	20.71
	8H	19.43	19.97	19.95	20.48	20.97	19.40	19.94	19.92	20.45	20.94
	12H	19.46	19.94	19.98	20.43	21.00	19.61	20.08	20.12	20.58	21.14
12H	4H	19.04	19.69	19.53	20.17	20.64	18.47	19.11	18.95	19.59	20.07
	6H	19.37	19.90	19.88	20.42	20.91	19.15	19.69	19.67	20.20	20.69
	8H	19.48	19.96	19.99	20.45	21.02	19.46	19.93	19.97	20.42	20.99