

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: P1059492

Luminaire Tested: S123RDR-H1165D830-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059492
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H1165D830-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

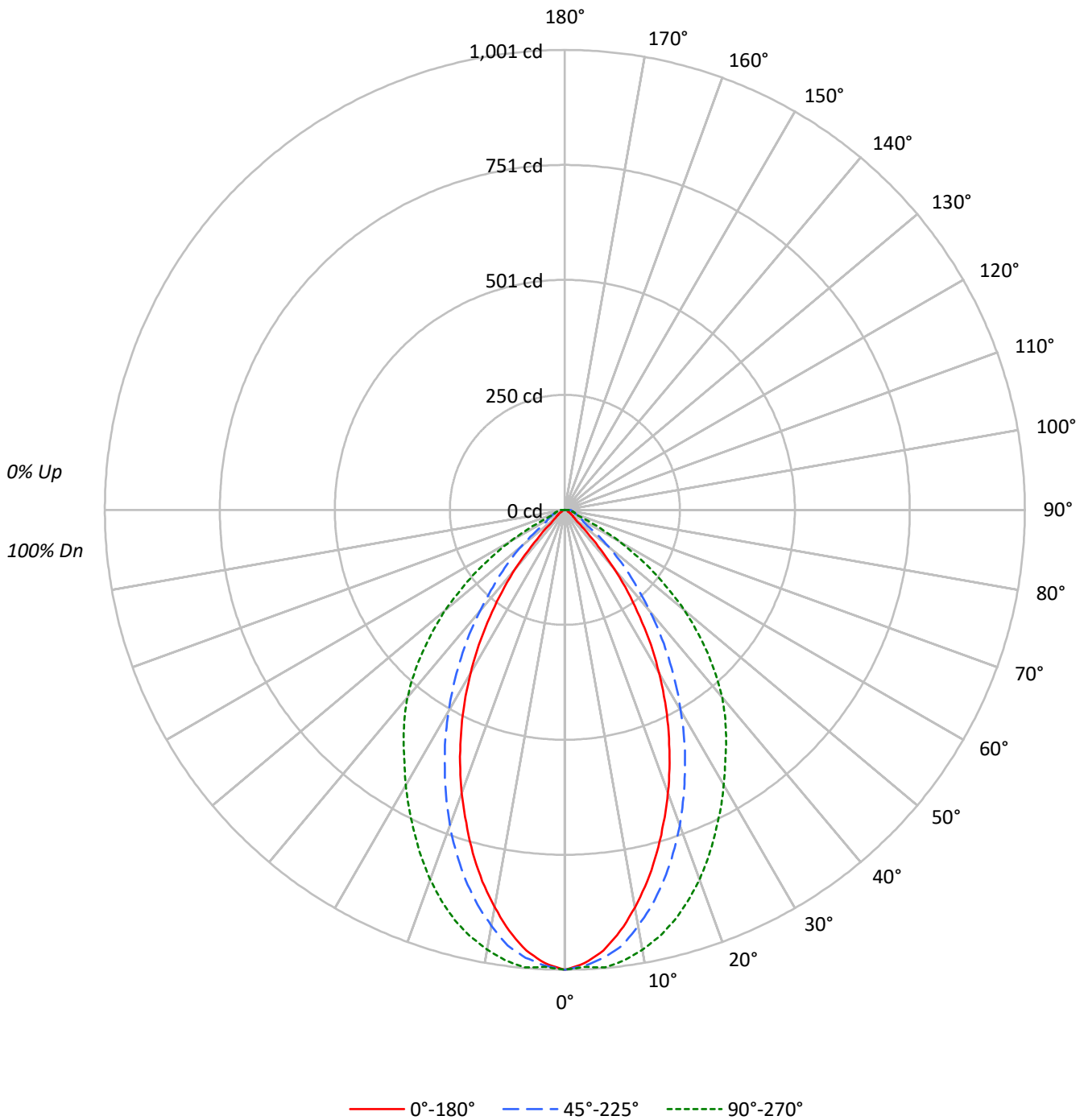
Lumens per Lamp: N/A
Luminaire Lumens: 1201.8 lumens
Efficiency: N/A
Efficacy: 32.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 36.5
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	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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				90
2	105	99	94	90	102	97	92	88	94	90	86	91	87	85	88	85	83	81				81
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73				73
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66				66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60				60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				55
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50				50
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47				47
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43				43
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40				40

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	11754	11754	11754
5°	11349	11535	11783
10°	10476	10963	11590
15°	9402	10137	11241
20°	8201	9138	10700
25°	6919	8010	10037
30°	5565	6849	9381
35°	4073	5638	8767
40°	2540	4395	8166
45°	962	3276	7274
50°	457	2258	6200
55°	350	1239	4793
60°	247	1050	3152
65°	183	914	1317
70°	182	858	858
75°	240	894	894
80°	358	1068	981
85°	714	1778	1415

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 7274 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.9	7.6
10°-20°	235.6	19.6
20°-30°	291.7	24.3
30°-40°	261.5	21.8
40°-50°	171.4	14.3
50°-60°	85.8	7.1
60°-70°	33.4	2.8
70°-80°	18.8	1.6
80°-90°	11.6	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°	619.1	51.5
0°-40°	880.6	73.3
0°-60°	1137.8	94.7
0°-90°	1201.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1201.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	963	979	979	989	1000	89
15°	773	805	834	889	925	215
25°	534	567	618	706	775	244
35°	284	322	393	512	612	177
45°	58	93	197	338	438	55
55°	17	21	60	166	234	16
65°	7	20	33	43	47	7
75°	5	20	20	20	20	6
85°	5	13	13	13	10	5
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1001.0	1001.0	1001.0	1001.0	1001.0
2.5°	987.8	1002.3	993.1	994.4	995.7
5°	962.8	978.6	978.6	989.1	999.6
7.5°	924.7	943.1	956.2	974.6	989.1
10°	878.6	901.0	919.4	952.3	972.0
12.5°	828.6	856.3	879.9	923.3	951.0
15°	773.4	805.0	833.9	889.2	924.7
17.5°	714.2	745.8	783.9	848.4	891.8
20°	656.3	687.9	731.3	803.7	856.3
22.5°	595.8	628.7	674.8	755.0	816.8
25°	534.0	566.9	618.2	706.3	774.7
27.5°	472.2	505.1	563.0	659.0	733.9
30°	410.4	443.3	505.1	607.7	691.9
32.5°	348.6	384.1	448.5	560.3	649.8
35°	284.1	322.3	393.3	511.7	611.6
37.5°	224.9	260.4	340.7	469.6	573.5
40°	165.7	203.9	286.7	428.8	532.7
42.5°	107.9	148.6	238.1	384.1	486.7
45°	57.9	93.4	197.3	338.0	438.0
47.5°	31.6	51.3	159.2	289.4	388.0
50°	25.0	28.9	123.6	247.3	339.4
52.5°	21.0	23.7	88.1	207.8	285.4
55°	17.1	21.0	60.5	165.7	234.1
57.5°	14.5	18.4	47.4	128.9	182.8
60°	10.5	15.8	44.7	94.7	134.2
62.5°	7.9	17.1	39.5	65.8	88.1
65°	6.6	19.7	32.9	43.4	47.4
67.5°	5.3	21.0	28.9	27.6	27.6
70°	5.3	19.7	25.0	23.7	25.0
72.5°	5.3	21.0	22.4	21.0	22.4
75°	5.3	19.7	19.7	19.7	19.7
77.5°	5.3	18.4	18.4	17.1	17.1
80°	5.3	15.8	15.8	15.8	14.5
82.5°	5.3	14.5	14.5	14.5	11.8
85°	5.3	13.2	13.2	13.2	10.5
87.5°	3.9	11.8	13.2	11.8	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	0.92	2.17	1.28	2.48	2.80	15.17	16.42	15.53	16.73	17.05
	3H	3.25	4.36	3.63	4.69	5.06	15.25	16.36	15.63	16.69	17.05
	4H	4.36	5.39	4.76	5.74	6.12	15.32	16.36	15.73	16.71	17.09
	6H	5.35	6.30	5.77	6.67	7.07	15.43	16.38	15.84	16.75	17.14
	8H	5.84	6.74	6.27	7.13	7.53	15.49	16.38	15.92	16.77	17.18
	12H	6.40	7.26	6.83	7.64	8.07	15.57	16.42	16.00	16.81	17.24
4H	2H	4.17	5.20	4.57	5.55	5.94	15.02	16.05	15.42	16.41	16.79
	3H	6.49	7.33	6.90	7.74	8.14	15.20	16.04	15.61	16.45	16.85
	4H	7.85	8.61	8.29	9.03	9.47	15.35	16.10	15.78	16.52	16.97
	6H	8.94	9.60	9.41	10.04	10.51	15.57	16.22	16.04	16.67	17.14
	8H	9.41	10.01	9.88	10.46	10.93	15.70	16.31	16.17	16.75	17.23
	12H	9.90	10.44	10.39	10.93	11.40	15.87	16.41	16.36	16.89	17.37
8H	4H	8.83	9.44	9.30	9.89	10.36	15.34	15.95	15.81	16.40	16.87
	6H	10.35	10.85	10.86	11.35	11.83	15.68	16.18	16.19	16.68	17.16
	8H	11.13	11.58	11.65	12.10	12.59	15.91	16.36	16.44	16.88	17.37
	12H	11.94	12.34	12.46	12.83	13.41	16.25	16.65	16.77	17.14	17.72
12H	4H	9.00	9.54	9.49	10.03	10.50	15.33	15.87	15.82	16.35	16.83
	6H	10.67	11.12	11.19	11.64	12.13	15.70	16.15	16.22	16.67	17.16
	8H	11.63	12.03	12.15	12.52	13.10	16.01	16.41	16.53	16.91	17.48