

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: P1059573

Luminaire Tested: S123RDR-H340D830-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059573
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-H340D830-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

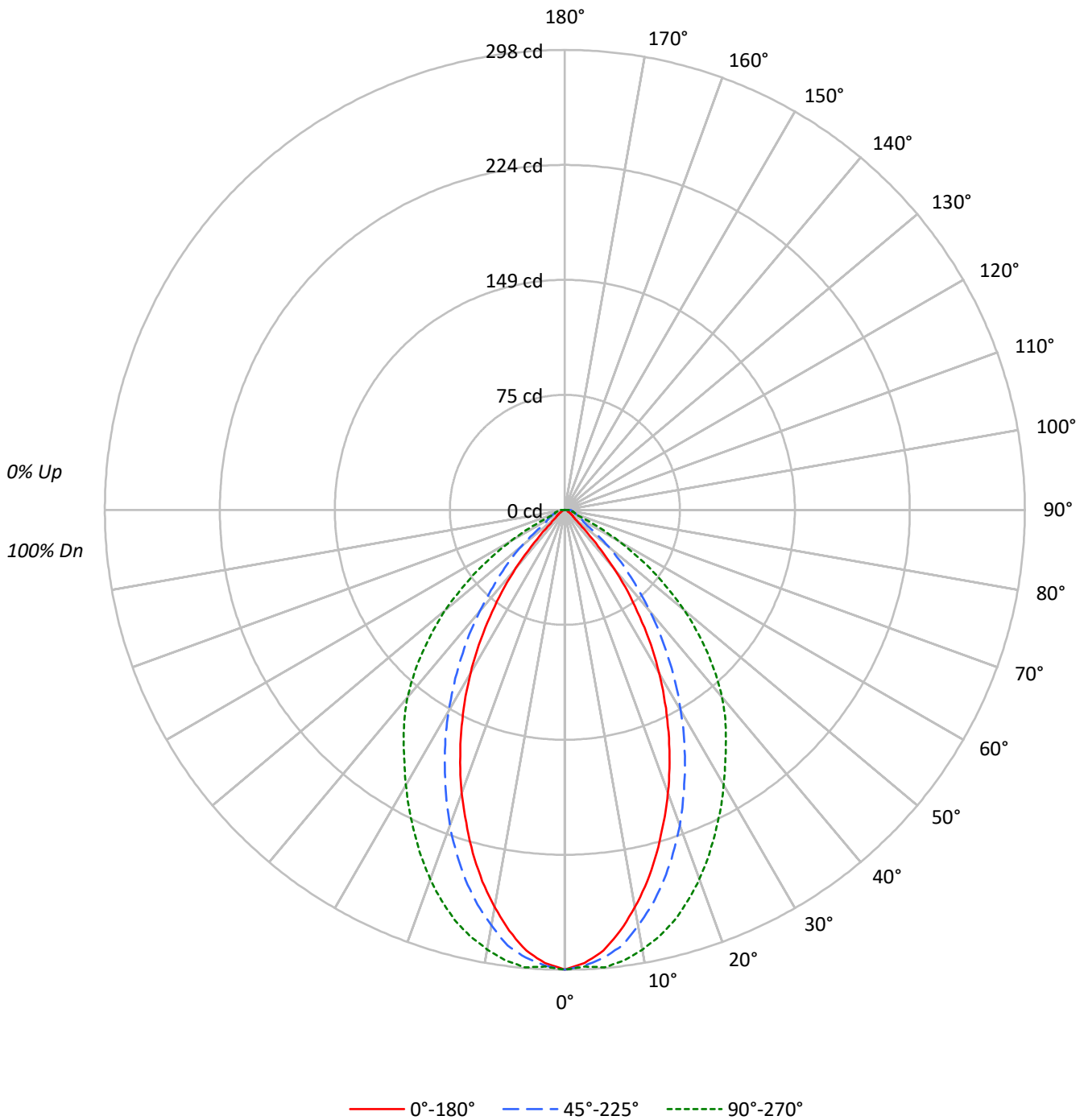
Lumens per Lamp: N/A
Luminaire Lumens: 357.7 lumens
Efficiency: N/A
Efficacy: 30.6 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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									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	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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90																												
2	105	99	94	90	102	97	92	88	94	90	86	91	87	85	88	85	83	81																												
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73																												
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66																												
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60																												
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55																												
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50																												
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47																												
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43																												
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40																												

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3498	3498	3498
5°	3378	3432	3507
10°	3118	3262	3449
15°	2798	3017	3346
20°	2440	2720	3184
25°	2059	2384	2988
30°	1656	2038	2792
35°	1213	1677	2609
40°	756	1308	2430
45°	286	975	2165
50°	135	672	1845
55°	104	369	1427
60°	73	312	937
65°	56	272	392
70°	55	254	254
75°	73	268	268
80°	108	318	291
85°	216	525	418

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 2165 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.3	7.6
10°-20°	70.1	19.6
20°-30°	86.8	24.3
30°-40°	77.8	21.8
40°-50°	51.0	14.3
50°-60°	25.5	7.1
60°-70°	10.0	2.8
70°-80°	5.6	1.6
80°-90°	3.5	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°	184.3	51.5
0°-40°	262.1	73.3
0°-60°	338.6	94.7
0°-90°	357.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	357.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	298	298	298	298	298	
5°	287	291	291	294	298	27
15°	230	240	248	265	275	64
25°	159	169	184	210	231	73
35°	85	96	117	152	182	53
45°	17	28	59	101	130	16
55°	5	6	18	49	70	5
65°	2	6	10	13	14	2
75°	2	6	6	6	6	2
85°	2	4	4	4	3	1
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	297.9	297.9	297.9	297.9	297.9
2.5°	294.0	298.3	295.6	295.9	296.3
5°	286.6	291.2	291.2	294.4	297.5
7.5°	275.2	280.7	284.6	290.1	294.4
10°	261.5	268.2	273.6	283.4	289.3
12.5°	246.6	254.8	261.9	274.8	283.0
15°	230.2	239.6	248.2	264.6	275.2
17.5°	212.6	222.0	233.3	252.5	265.4
20°	195.3	204.7	217.7	239.2	254.8
22.5°	177.3	187.1	200.8	224.7	243.1
25°	158.9	168.7	184.0	210.2	230.6
27.5°	140.5	150.3	167.5	196.1	218.4
30°	122.1	131.9	150.3	180.9	205.9
32.5°	103.7	114.3	133.5	166.8	193.4
35°	84.6	95.9	117.0	152.3	182.0
37.5°	66.9	77.5	101.4	139.8	170.7
40°	49.3	60.7	85.3	127.6	158.5
42.5°	32.1	44.2	70.9	114.3	144.8
45°	17.2	27.8	58.7	100.6	130.4
47.5°	9.4	15.3	47.4	86.1	115.5
50°	7.4	8.6	36.8	73.6	101.0
52.5°	6.3	7.0	26.2	61.9	84.9
55°	5.1	6.3	18.0	49.3	69.7
57.5°	4.3	5.5	14.1	38.4	54.4
60°	3.1	4.7	13.3	28.2	39.9
62.5°	2.3	5.1	11.7	19.6	26.2
65°	2.0	5.9	9.8	12.9	14.1
67.5°	1.6	6.3	8.6	8.2	8.2
70°	1.6	5.9	7.4	7.0	7.4
72.5°	1.6	6.3	6.7	6.3	6.7
75°	1.6	5.9	5.9	5.9	5.9
77.5°	1.6	5.5	5.5	5.1	5.1
80°	1.6	4.7	4.7	4.7	4.3
82.5°	1.6	4.3	4.3	4.3	3.5
85°	1.6	3.9	3.9	3.9	3.1
87.5°	1.2	3.5	3.9	3.5	2.3
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	0.00	0.00	0.00	0.00	0.00	10.96	12.22	11.32	12.53	12.84
	3H	0.00	0.19	0.00	0.52	0.89	11.04	12.15	11.42	12.48	12.85
	4H	0.19	1.23	0.60	1.58	1.96	11.12	12.15	11.52	12.50	12.89
	6H	1.19	2.14	1.61	2.51	2.91	11.22	12.17	11.64	12.54	12.94
	8H	1.68	2.57	2.11	2.97	3.37	11.28	12.18	11.71	12.57	12.97
	12H	2.24	3.10	2.67	3.48	3.91	11.36	12.22	11.79	12.60	13.03
4H	2H	0.00	1.00	0.37	1.35	1.74	10.81	11.85	11.22	12.20	12.58
	3H	2.30	3.14	2.71	3.55	3.95	10.99	11.83	11.40	12.24	12.64
	4H	3.68	4.43	4.11	4.85	5.30	11.14	11.90	11.58	12.32	12.76
	6H	4.77	5.42	5.23	5.87	6.33	11.37	12.02	11.83	12.47	12.93
	8H	5.23	5.83	5.70	6.28	6.75	11.49	12.10	11.96	12.55	13.02
	12H	5.72	6.26	6.21	6.75	7.22	11.66	12.20	12.15	12.68	13.16
8H	4H	4.65	5.26	5.12	5.71	6.18	11.14	11.75	11.61	12.20	12.67
	6H	6.17	6.67	6.67	7.16	7.65	11.48	11.98	11.98	12.47	12.96
	8H	6.94	7.39	7.46	7.90	8.40	11.71	12.16	12.23	12.67	13.17
	12H	7.74	8.14	8.26	8.64	9.21	12.04	12.44	12.55	12.93	13.50
12H	4H	4.82	5.36	5.31	5.84	6.32	11.12	11.66	11.61	12.15	12.62
	6H	6.48	6.93	7.00	7.45	7.94	11.50	11.95	12.02	12.46	12.95
	8H	7.43	7.83	7.95	8.32	8.90	11.80	12.20	12.32	12.70	13.27