

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: P1059577

Luminaire Tested: S123RDR-H340D830-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059577
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-H340D830-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

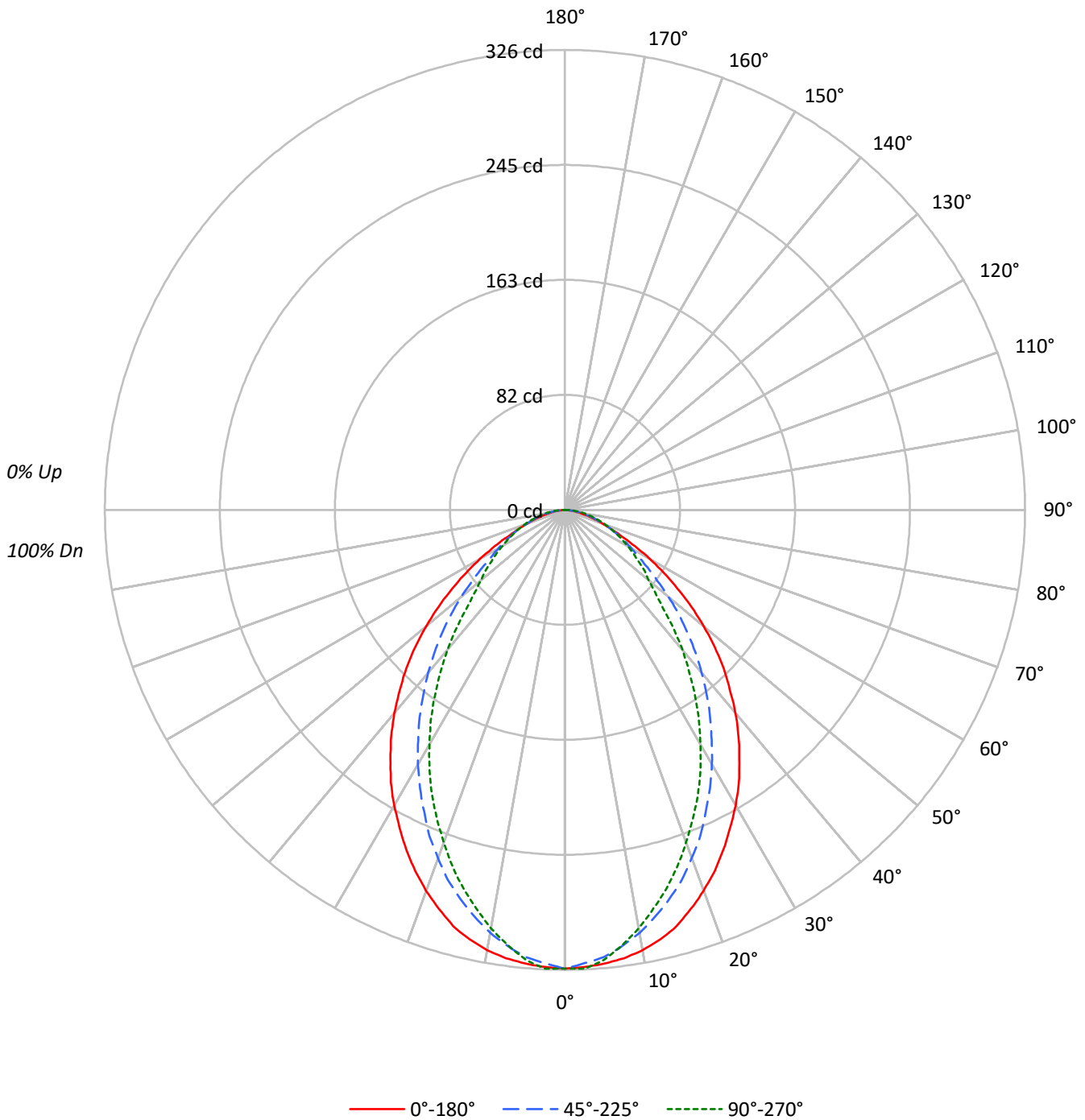
Lumens per Lamp: N/A
Luminaire Lumens: 568.8 lumens
Efficiency: N/A
Efficacy: 48.6 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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

TEST NUMBER: P1059577

CATALOG NUMBER: S123RDR-H340D830-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°	3819	3819	3819
5°	3805	3751	3773
10°	3780	3631	3593
15°	3715	3473	3378
20°	3590	3283	3135
25°	3444	3059	2887
30°	3280	2824	2602
35°	3088	2572	2302
40°	2882	2307	1984
45°	2642	2038	1629
50°	2342	1750	1414
55°	1992	1464	1296
60°	1625	1275	1202
65°	1239	1128	1120
70°	965	1006	1047
75°	780	903	975
80°	582	737	899
85°	310	472	795

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2642 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	30.2	5.3
10°-20°	81.2	14.3
20°-30°	110.4	19.4
30°-40°	114.5	20.1
40°-50°	96.5	17.0
50°-60°	68.5	12.0
60°-70°	41.9	7.4
70°-80°	20.8	3.7
80°-90°	4.7	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°	221.8	39.0
0°-40°	336.3	59.1
0°-60°	501.3	88.1
0°-90°	568.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	568.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	325	325	325	325	325	
5°	323	323	318	320	320	31
15°	306	300	286	281	278	86
25°	266	254	236	228	223	122
35°	215	199	179	167	161	135
45°	159	142	123	106	98	122
55°	97	87	72	65	63	87
65°	45	43	41	41	40	45
75°	17	18	20	21	22	19
85°	2	3	4	5	6	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	325.2	325.2	325.2	325.2	325.2
2.5°	324.4	324.8	321.7	325.2	325.6
5°	322.8	322.8	318.2	320.1	320.1
7.5°	320.5	319.7	311.9	311.9	311.1
10°	317.0	314.6	304.5	302.5	301.3
12.5°	311.9	308.0	295.5	292.0	289.6
15°	305.6	299.8	285.7	280.6	277.9
17.5°	296.7	290.8	275.2	268.1	265.0
20°	287.3	278.7	262.7	255.6	250.9
22.5°	277.1	266.2	250.5	241.9	236.9
25°	265.8	254.1	236.1	227.5	222.8
27.5°	253.7	240.8	222.4	212.6	207.9
30°	241.9	227.1	208.3	197.4	191.9
32.5°	229.4	212.6	193.5	182.1	176.7
35°	215.4	198.9	179.4	166.9	160.6
37.5°	202.1	185.3	164.9	151.7	144.6
40°	188.0	171.2	150.5	136.8	129.4
42.5°	173.1	157.1	136.8	120.8	113.7
45°	159.1	142.3	122.7	105.9	98.1
47.5°	143.8	128.2	109.0	91.9	86.4
50°	128.2	113.7	95.8	80.1	77.4
52.5°	113.0	100.8	82.5	72.3	71.1
55°	97.3	87.2	71.5	65.3	63.3
57.5°	82.9	75.4	61.4	58.2	57.5
60°	69.2	62.9	54.3	52.4	51.2
62.5°	55.9	52.4	47.3	46.5	45.7
65°	44.6	43.0	40.6	40.6	40.3
67.5°	35.2	35.2	34.8	35.6	35.2
70°	28.1	28.5	29.3	30.1	30.5
72.5°	22.3	23.5	24.2	25.4	25.8
75°	17.2	18.4	19.9	20.7	21.5
77.5°	12.5	13.7	15.2	16.4	17.2
80°	8.6	9.4	10.9	12.5	13.3
82.5°	5.5	5.9	7.0	8.6	9.4
85°	2.3	2.7	3.5	5.1	5.9
87.5°	0.0	0.0	0.4	1.6	2.7
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	13.46	14.91	13.83	15.23	15.54	11.56	13.01	11.92	13.32	13.64
	3H	14.36	15.66	14.74	15.98	16.35	13.13	14.43	13.51	14.76	15.12
	4H	14.64	15.86	15.04	16.20	16.59	13.73	14.94	14.13	15.29	15.67
	6H	14.79	15.91	15.21	16.28	16.67	14.18	15.30	14.59	15.67	16.06
	8H	14.82	15.88	15.24	16.27	16.67	14.33	15.39	14.76	15.78	16.19
	12H	14.81	15.83	15.24	16.21	16.64	14.43	15.45	14.86	15.83	16.26
4H	2H	13.71	14.92	14.11	15.27	15.65	12.10	13.31	12.50	13.66	14.04
	3H	14.82	15.82	15.23	16.22	16.62	13.88	14.88	14.29	15.28	15.68
	4H	15.21	16.11	15.64	16.53	16.97	14.59	15.48	15.02	15.90	16.34
	6H	15.45	16.23	15.91	16.68	17.14	15.16	15.94	15.62	16.38	16.84
	8H	15.50	16.22	15.96	16.67	17.14	15.35	16.08	15.82	16.52	16.99
	12H	15.50	16.15	15.99	16.63	17.10	15.49	16.14	15.97	16.62	17.09
8H	4H	15.37	16.10	15.83	16.54	17.01	14.80	15.52	15.26	15.97	16.44
	6H	15.68	16.28	16.18	16.77	17.25	15.47	16.07	15.97	16.56	17.04
	8H	15.76	16.30	16.28	16.81	17.30	15.73	16.27	16.25	16.78	17.27
	12H	15.79	16.27	16.30	16.76	17.33	15.94	16.41	16.45	16.91	17.47
12H	4H	15.37	16.02	15.86	16.50	16.97	14.79	15.44	15.28	15.92	16.39
	6H	15.69	16.23	16.21	16.74	17.23	15.48	16.02	16.00	16.53	17.02
	8H	15.81	16.28	16.32	16.78	17.35	15.78	16.26	16.29	16.75	17.32