

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: P1059622

Luminaire Tested: S123RDR-H340D930-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059622
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-H340D930-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, 90 CRI LEDS
Ballast/Driver: -

Summary

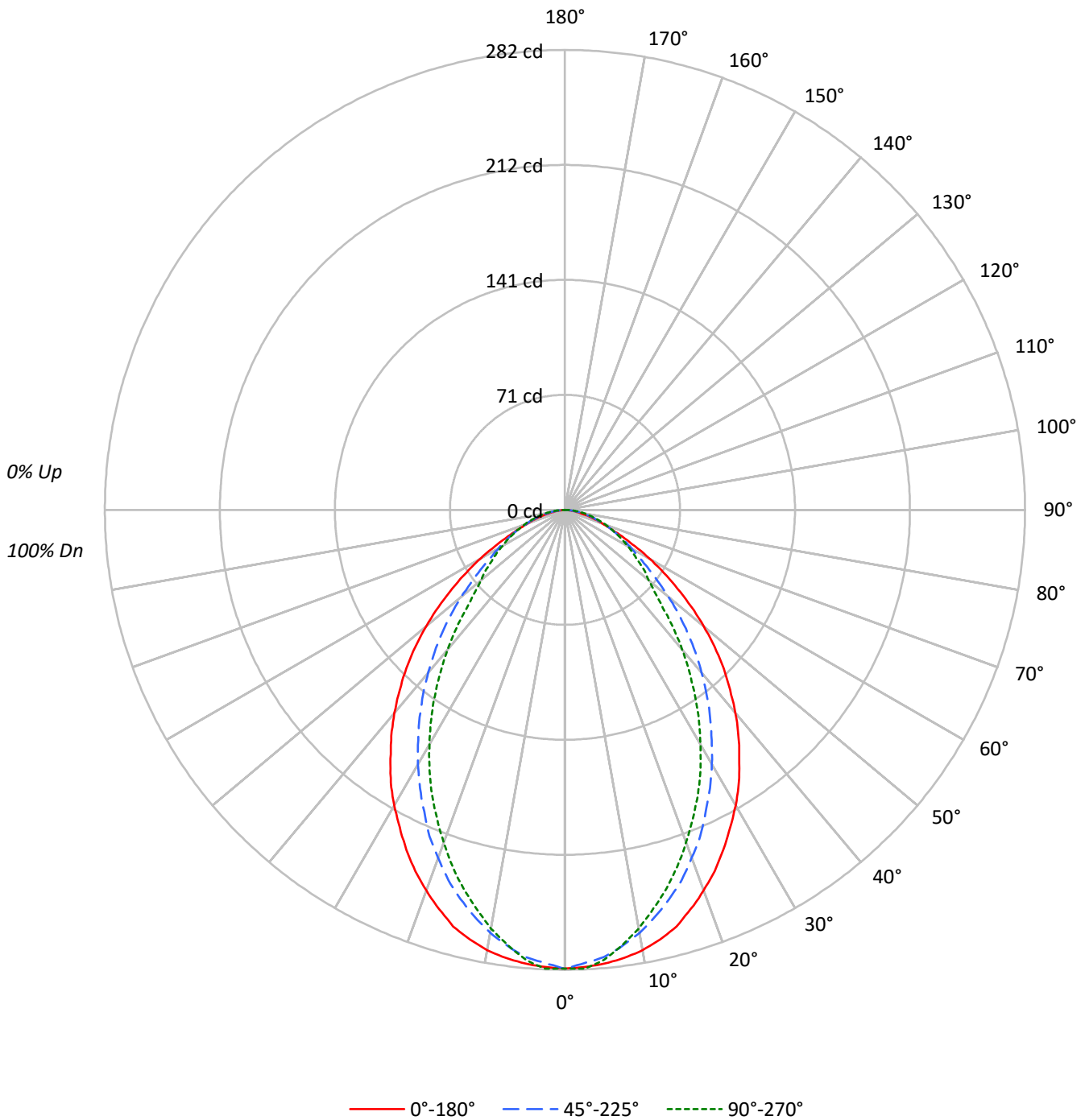
Lumens per Lamp: N/A
Luminaire Lumens: 492.0 lumens
Efficiency: N/A
Efficacy: 42.1 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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

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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				
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°	3303	3303	3303
5°	3292	3244	3264
10°	3269	3141	3108
15°	3214	3004	2922
20°	3105	2839	2713
25°	2979	2646	2497
30°	2838	2443	2251
35°	2671	2225	1993
40°	2492	1996	1715
45°	2285	1764	1410
50°	2026	1513	1222
55°	1724	1267	1122
60°	1404	1104	1040
65°	1070	978	967
70°	834	872	906
75°	676	780	844
80°	500	642	778
85°	269	404	687

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2285 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.1	5.3
10°-20°	70.2	14.3
20°-30°	95.5	19.4
30°-40°	99.0	20.1
40°-50°	83.5	17.0
50°-60°	59.3	12.0
60°-70°	36.2	7.4
70°-80°	18.0	3.7
80°-90°	4.1	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°	191.9	39.0
0°-40°	290.9	59.1
0°-60°	433.7	88.1
0°-90°	492.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	492.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	281	281	281	281	281	
5°	279	279	275	277	277	27
15°	264	259	247	243	240	74
25°	230	220	204	197	193	106
35°	186	172	155	144	139	117
45°	138	123	106	92	85	106
55°	84	75	62	56	55	76
65°	38	37	35	35	35	39
75°	15	16	17	18	19	16
85°	2	2	3	4	5	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	281.3	281.3	281.3	281.3	281.3
2.5°	280.6	281.0	278.2	281.3	281.6
5°	279.3	279.3	275.2	276.9	276.9
7.5°	277.2	276.6	269.8	269.8	269.1
10°	274.2	272.2	263.4	261.7	260.7
12.5°	269.8	266.4	255.6	252.6	250.5
15°	264.4	259.3	247.1	242.7	240.4
17.5°	256.6	251.5	238.0	231.9	229.2
20°	248.5	241.1	227.2	221.1	217.1
22.5°	239.7	230.2	216.7	209.3	204.9
25°	229.9	219.8	204.2	196.8	192.7
27.5°	219.4	208.3	192.4	183.9	179.9
30°	209.3	196.4	180.2	170.7	166.0
32.5°	198.5	183.9	167.4	157.5	152.8
35°	186.3	172.1	155.2	144.4	139.0
37.5°	174.8	160.3	142.7	131.2	125.1
40°	162.6	148.1	130.2	118.3	111.9
42.5°	149.8	135.9	118.3	104.5	98.4
45°	137.6	123.1	106.2	91.6	84.9
47.5°	124.4	110.9	94.3	79.5	74.7
50°	110.9	98.4	82.8	69.3	66.9
52.5°	97.7	87.2	71.3	62.5	61.5
55°	84.2	75.4	61.9	56.5	54.8
57.5°	71.7	65.3	53.1	50.4	49.7
60°	59.8	54.4	47.0	45.3	44.3
62.5°	48.3	45.3	40.9	40.2	39.6
65°	38.5	37.2	35.2	35.2	34.8
67.5°	30.4	30.4	30.1	30.8	30.4
70°	24.3	24.7	25.4	26.0	26.4
72.5°	19.3	20.3	21.0	22.0	22.3
75°	14.9	15.9	17.2	17.9	18.6
77.5°	10.8	11.8	13.2	14.2	14.9
80°	7.4	8.1	9.5	10.8	11.5
82.5°	4.7	5.1	6.1	7.4	8.1
85°	2.0	2.4	3.0	4.4	5.1
87.5°	0.0	0.0	0.3	1.4	2.4
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	12.96	14.41	13.33	14.73	15.04	11.06	12.51	11.42	12.82	13.14
	3H	13.86	15.15	14.24	15.48	15.85	12.63	13.93	13.01	14.26	14.62
	4H	14.14	15.35	14.54	15.70	16.08	13.23	14.44	13.63	14.79	15.17
	6H	14.29	15.41	14.70	15.78	16.17	13.68	14.80	14.09	15.16	15.56
	8H	14.31	15.38	14.74	15.77	16.17	13.83	14.89	14.25	15.28	15.68
	12H	14.31	15.32	14.74	15.71	16.13	13.93	14.94	14.36	15.32	15.75
4H	2H	13.21	14.42	13.61	14.77	15.15	11.60	12.81	12.00	13.16	13.54
	3H	14.32	15.32	14.73	15.72	16.12	13.37	14.38	13.79	14.78	15.18
	4H	14.71	15.61	15.14	16.03	16.47	14.09	14.98	14.52	15.40	15.84
	6H	14.95	15.73	15.41	16.17	16.64	14.66	15.44	15.12	15.88	16.34
	8H	14.99	15.72	15.46	16.17	16.63	14.85	15.57	15.31	16.02	16.49
	12H	15.00	15.65	15.48	16.13	16.60	14.99	15.63	15.47	16.11	16.59
8H	4H	14.87	15.60	15.33	16.04	16.51	14.29	15.02	14.76	15.47	15.94
	6H	15.18	15.78	15.68	16.27	16.75	14.97	15.57	15.47	16.06	16.54
	8H	15.26	15.79	15.77	16.30	16.79	15.23	15.76	15.74	16.27	16.76
	12H	15.29	15.76	15.80	16.26	16.82	15.43	15.91	15.95	16.40	16.97
12H	4H	14.87	15.52	15.36	16.00	16.47	14.29	14.94	14.78	15.42	15.89
	6H	15.19	15.73	15.71	16.24	16.73	14.98	15.52	15.50	16.03	16.52
	8H	15.31	15.78	15.82	16.28	16.84	15.28	15.75	15.79	16.25	16.82