

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: P1059460

Luminaire Tested: S123RDR-H1000D930-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059460  
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-H1000D930-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: -

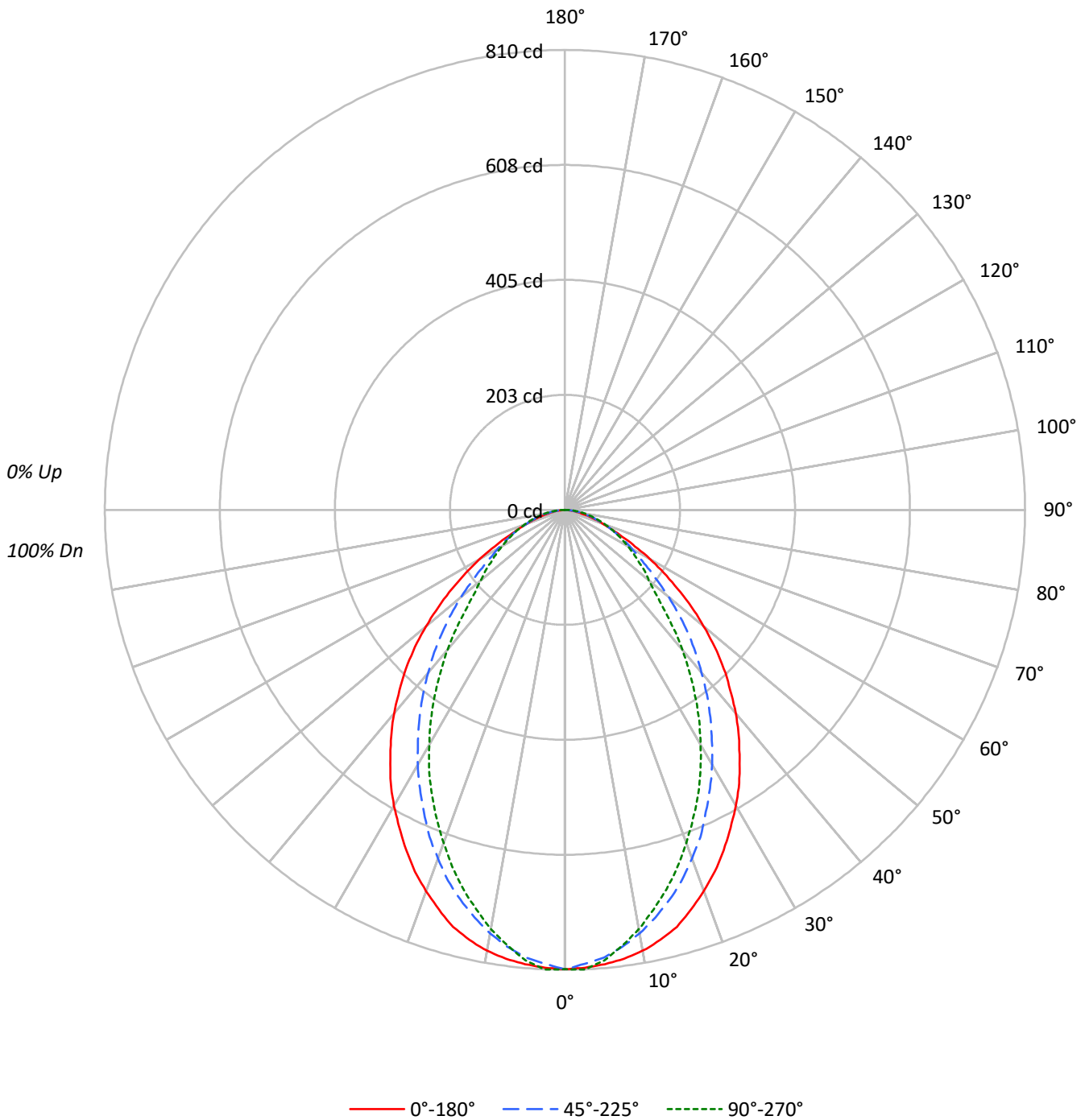
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1415.0 lumens  
Efficiency: N/A  
Efficacy: 45.4 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

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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°	9501	9501	9501
5°	9468	9331	9387
10°	9403	9032	8939
15°	9244	8641	8405
20°	8931	8166	7801
25°	8567	7609	7182
30°	8161	7028	6474
35°	7681	6398	5730
40°	7169	5739	4934
45°	6573	5070	4054
50°	5827	4351	3517
55°	4956	3644	3224
60°	4042	3175	2992
65°	3081	2809	2784
70°	2403	2503	2602
75°	1942	2250	2427
80°	1447	1839	2238
85°	781	1186	1967

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6573 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	75.1	5.3
10°-20°	202.1	14.3
20°-30°	274.7	19.4
30°-40°	284.8	20.1
40°-50°	240.2	17.0
50°-60°	170.5	12.0
60°-70°	104.2	7.4
70°-80°	51.8	3.7
80°-90°	11.8	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°	551.9	39.0
0°-40°	836.6	59.1
0°-60°	1247.3	88.1
0°-90°	1415.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1415.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	809	809	809	809	809	
5°	803	803	792	796	796	76
15°	760	746	711	698	691	213
25°	661	632	587	566	554	304
35°	536	495	446	415	400	335
45°	396	354	305	264	244	304
55°	242	217	178	162	158	217
65°	111	107	101	101	100	113
75°	43	46	50	52	54	46
85°	6	7	9	13	15	8
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	809.1	809.1	809.1	809.1	809.1
2.5°	807.1	808.1	800.3	809.1	810.0
5°	803.2	803.2	791.6	796.4	796.4
7.5°	797.4	795.4	776.0	776.0	774.1
10°	788.6	782.8	757.5	752.7	749.7
12.5°	776.0	766.3	735.2	726.4	720.6
15°	760.4	745.9	710.8	698.2	691.4
17.5°	738.1	723.5	684.6	667.1	659.3
20°	714.7	693.3	653.5	636.0	624.3
22.5°	689.4	662.2	623.3	601.9	589.3
25°	661.2	632.1	587.3	566.0	554.3
27.5°	631.1	599.0	553.3	529.0	517.3
30°	601.9	565.0	518.3	491.1	477.5
32.5°	570.8	529.0	481.4	453.2	439.5
35°	535.8	495.0	446.3	415.2	399.7
37.5°	502.7	460.9	410.4	377.3	359.8
40°	467.7	425.9	374.4	340.3	321.9
42.5°	430.8	390.9	340.3	300.5	283.0
45°	395.8	354.0	305.3	263.5	244.1
47.5°	357.9	319.0	271.3	228.5	214.9
50°	319.0	283.0	238.2	199.3	192.5
52.5°	281.0	250.9	205.2	179.9	177.0
55°	242.1	216.9	178.0	162.4	157.5
57.5°	206.2	187.7	152.7	144.9	142.9
60°	172.1	156.6	135.2	130.3	127.4
62.5°	139.1	130.3	117.7	115.7	113.8
65°	110.9	107.0	101.1	101.1	100.2
67.5°	87.5	87.5	86.5	88.5	87.5
70°	70.0	71.0	72.9	74.9	75.8
72.5°	55.4	58.3	60.3	63.2	64.2
75°	42.8	45.7	49.6	51.5	53.5
77.5°	31.1	34.0	37.9	40.8	42.8
80°	21.4	23.3	27.2	31.1	33.1
82.5°	13.6	14.6	17.5	21.4	23.3
85°	5.8	6.8	8.8	12.6	14.6
87.5°	0.0	0.0	1.0	3.9	6.8
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	16.63	18.08	17.00	18.40	18.71	14.73	16.18	15.09	16.49	16.81
	3H	17.53	18.82	17.91	19.15	19.52	16.30	17.60	16.68	17.92	18.29
	4H	17.81	19.02	18.21	19.37	19.75	16.90	18.11	17.30	18.46	18.84
	6H	17.96	19.08	18.37	19.45	19.84	17.35	18.46	17.76	18.83	19.23
	8H	17.98	19.05	18.41	19.44	19.84	17.50	18.56	17.92	18.95	19.35
	12H	17.98	18.99	18.41	19.38	19.81	17.59	18.61	18.03	18.99	19.42
4H	2H	16.88	18.09	17.28	18.44	18.82	15.27	16.48	15.67	16.83	17.21
	3H	17.99	18.99	18.40	19.39	19.79	17.04	18.04	17.45	18.44	18.85
	4H	18.38	19.28	18.81	19.69	20.13	17.75	18.65	18.19	19.07	19.51
	6H	18.62	19.40	19.08	19.84	20.30	18.33	19.10	18.79	19.55	20.01
	8H	18.66	19.39	19.13	19.83	20.30	18.52	19.24	18.98	19.69	20.16
	12H	18.67	19.32	19.15	19.80	20.27	18.66	19.30	19.14	19.78	20.26
8H	4H	18.54	19.26	19.00	19.71	20.18	17.96	18.69	18.43	19.14	19.60
	6H	18.85	19.45	19.35	19.94	20.42	18.64	19.24	19.14	19.73	20.21
	8H	18.92	19.46	19.44	19.97	20.46	18.90	19.43	19.41	19.94	20.43
	12H	18.96	19.43	19.47	19.93	20.49	19.10	19.58	19.62	20.07	20.64
12H	4H	18.54	19.19	19.02	19.67	20.14	17.96	18.61	18.44	19.09	19.56
	6H	18.86	19.40	19.38	19.91	20.40	18.65	19.19	19.16	19.70	20.19
	8H	18.98	19.45	19.49	19.94	20.51	18.95	19.42	19.46	19.92	20.49