

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: P1059535

Luminaire Tested: S123RDR-H1165D930-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059535  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H1165D930-X4F0-XX-UDD-BVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: -

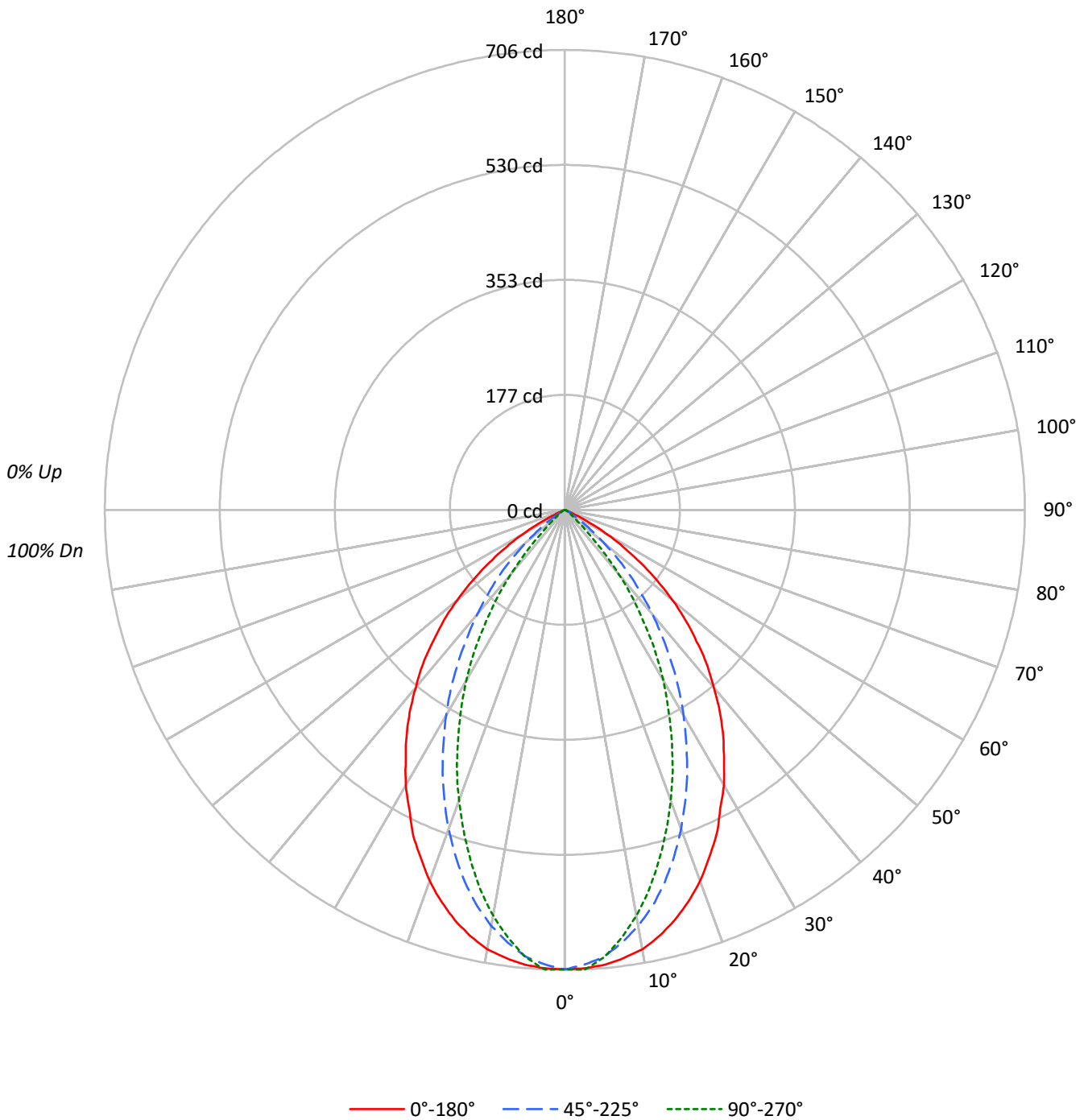
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 804.9 lumens  
Efficiency: N/A  
Efficacy: 22.1 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.81 / 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	100	100	
1	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92	92	92	92	
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84	84	84	84	
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76	76	76	76	
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69	69	69	69	
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63	63	63	63	
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58	58	58	58	
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53	53	53	53	
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49	49	49	49	
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46	46	46	46	
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42	42	42	42	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	8283	8283	8283
5°	8262	8114	8127
10°	8168	7734	7544
15°	7926	7194	6780
20°	7580	6515	5933
25°	7138	5754	5018
30°	6622	4944	4098
35°	6074	4087	3045
40°	5449	3204	1950
45°	4753	2340	810
50°	3942	1390	311
55°	2907	581	233
60°	1761	214	134
65°	472	125	64
70°	0	38	38
75°	0	0	50
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 4753 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.9	8.1
10°-20°	167.6	20.8
20°-30°	208.9	25.9
30°-40°	186.8	23.2
40°-50°	117.9	14.6
50°-60°	49.3	6.1
60°-70°	9.3	1.2
70°-80°	0.3	0.0
80°-90°	0.0	0.0
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°	441.4	54.8
0°-40°	628.2	78.0
0°-60°	795.3	98.8
0°-90°	804.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	804.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	705	705	705	705	705	
5°	701	700	688	691	690	66
15°	652	636	592	567	558	183
25°	551	507	444	406	387	252
35°	424	362	285	234	212	264
45°	286	223	141	75	49	221
55°	142	98	28	11	11	127
65°	17	12	4	2	2	24
75°	0	0	0	0	1	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	705.4	705.4	705.4	705.4	705.4
2.5°	704.3	705.4	698.6	705.4	706.5
5°	700.9	699.7	688.4	690.6	689.5
7.5°	694.0	690.6	670.2	665.6	663.4
10°	685.0	675.9	648.6	637.2	632.7
12.5°	670.2	657.7	622.5	604.3	597.5
15°	652.0	636.1	591.8	566.8	557.7
17.5°	630.4	607.7	557.7	530.5	516.8
20°	606.6	574.8	521.4	488.4	474.8
22.5°	578.2	543.0	482.8	447.5	432.8
25°	550.9	506.6	444.1	405.5	387.3
27.5°	516.8	470.3	403.2	363.5	344.2
30°	488.4	435.1	364.6	320.3	302.2
32.5°	454.4	398.7	324.9	276.0	259.0
35°	423.7	362.4	285.1	234.0	212.4
37.5°	390.8	327.1	245.4	192.0	171.5
40°	355.5	291.9	209.0	149.9	127.2
42.5°	323.7	256.7	172.7	111.3	88.6
45°	286.2	222.6	140.9	75.0	48.8
47.5°	252.2	190.8	106.8	42.0	26.1
50°	215.8	157.9	76.1	21.6	17.0
52.5°	178.3	126.1	50.0	14.8	13.6
55°	142.0	97.7	28.4	11.4	11.4
57.5°	106.8	70.4	14.8	9.1	8.0
60°	75.0	46.6	9.1	6.8	5.7
62.5°	43.2	27.3	6.8	4.5	4.5
65°	17.0	12.5	4.5	2.3	2.3
67.5°	1.1	3.4	2.3	1.1	1.1
70°	0.0	0.0	1.1	1.1	1.1
72.5°	0.0	0.0	1.1	1.1	1.1
75°	0.0	0.0	0.0	0.0	1.1
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
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	12.53	13.71	12.90	14.02	14.34	0.00	0.00	0.00	0.00	0.00
	3H	12.38	13.41	12.76	13.74	14.10	0.00	0.00	0.00	0.00	0.00
	4H	12.29	13.24	12.69	13.60	13.98	0.00	0.00	0.00	0.00	0.00
	6H	12.20	13.07	12.61	13.44	13.84	0.00	0.00	0.00	0.00	0.00
	8H	12.15	12.97	12.58	13.36	13.77	0.00	0.00	0.00	0.00	0.00
	12H	12.10	12.88	12.53	13.26	13.70	0.00	0.00	0.00	0.00	0.00
4H	2H	12.29	13.25	12.70	13.60	13.99	0.00	0.00	0.00	0.00	0.00
	3H	12.13	12.90	12.54	13.30	13.71	0.00	0.00	0.00	0.00	0.00
	4H	12.02	12.71	12.46	13.13	13.57	0.00	0.00	0.00	0.00	0.00
	6H	11.93	12.51	12.40	12.96	13.43	0.00	0.00	0.00	0.00	0.00
	8H	11.86	12.41	12.34	12.86	13.33	0.00	0.00	0.00	0.00	0.00
	12H	11.81	12.28	12.29	12.77	13.24	0.00	0.00	0.00	0.00	0.00
8H	4H	11.86	12.41	12.34	12.86	13.33	0.00	0.00	0.00	0.00	0.00
	6H	11.75	12.19	12.25	12.69	13.17	0.00	0.00	0.00	0.00	0.00
	8H	11.67	12.07	12.20	12.59	13.08	0.00	0.00	0.00	0.00	0.00
	12H	11.62	11.97	12.14	12.47	13.04	0.00	0.00	0.00	0.00	0.00
12H	4H	11.81	12.28	12.29	12.77	13.24	0.00	0.00	0.00	0.00	0.00
	6H	11.67	12.07	12.20	12.59	13.08	0.00	0.00	0.00	0.00	0.00
	8H	11.62	11.97	12.14	12.47	13.04	0.00	0.00	0.00	0.00	0.00