

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: P1059793

Luminaire Tested: S123RDR-H775D935-X4F0-XX-UDD-WVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059793  
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-H775D935-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: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

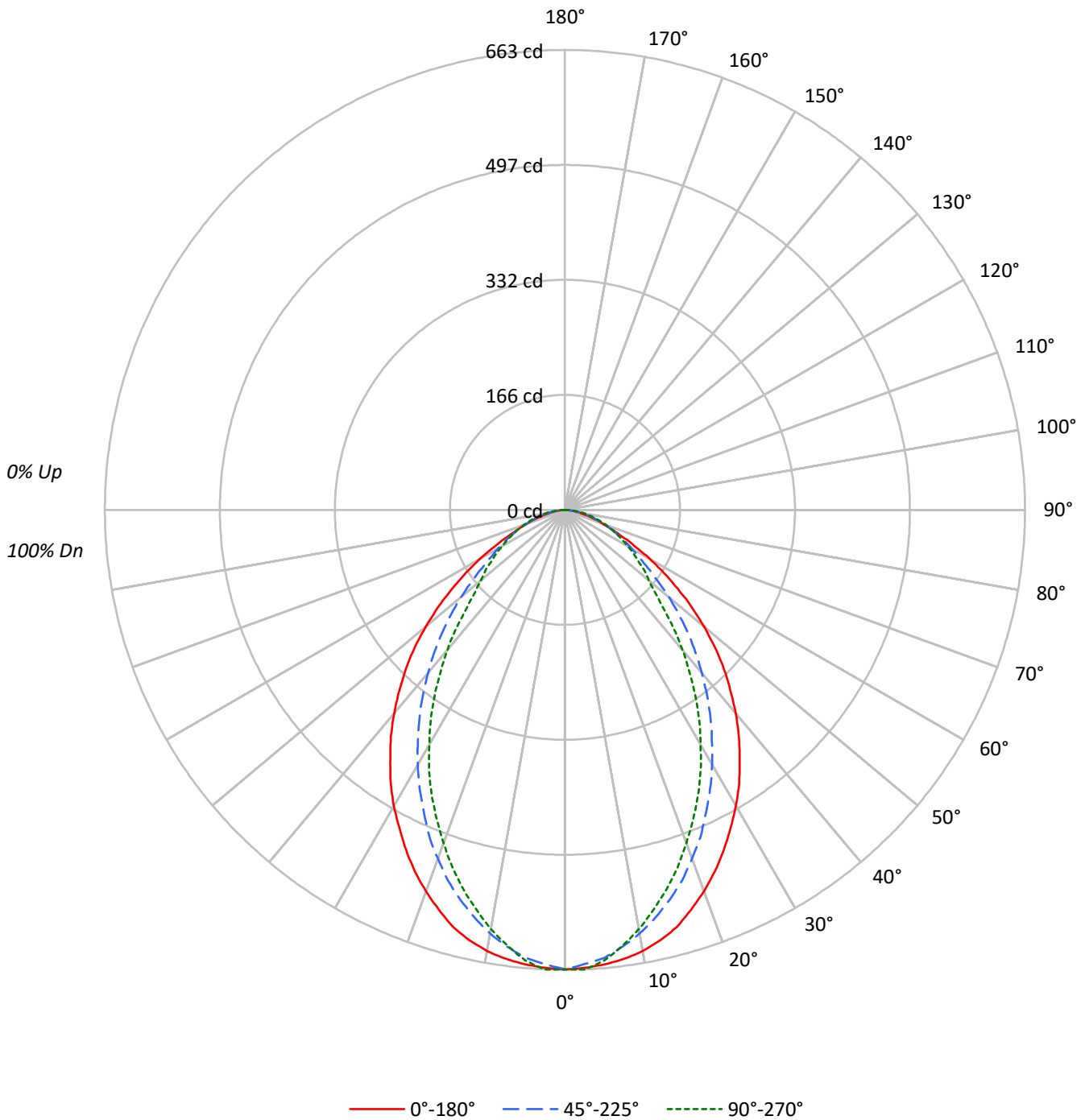
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1158.8 lumens  
Efficiency: N/A  
Efficacy: 49.3 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): 23.5  
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				
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°	7779	7779	7779
5°	7753	7641	7688
10°	7700	7396	7320
15°	7570	7076	6883
20°	7314	6687	6388
25°	7016	6232	5881
30°	6683	5754	5302
35°	6290	5239	4692
40°	5871	4700	4041
45°	5382	4152	3320
50°	4772	3564	2881
55°	4060	2983	2641
60°	3309	2600	2449
65°	2523	2301	2278
70°	1967	2050	2132
75°	1588	1842	1987
80°	1183	1508	1833
85°	647	970	1603

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 5382 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.5	5.3
10°-20°	165.5	14.3
20°-30°	224.9	19.4
30°-40°	233.2	20.1
40°-50°	196.7	17.0
50°-60°	139.6	12.0
60°-70°	85.3	7.4
70°-80°	42.5	3.7
80°-90°	9.6	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°	451.9	39.0
0°-40°	685.1	59.1
0°-60°	1021.3	88.1
0°-90°	1158.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1158.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	662	662	662	662	662	
5°	658	658	648	652	652	62
15°	623	611	582	572	566	175
25°	542	518	481	463	454	249
35°	439	405	366	340	327	274
45°	324	290	250	216	200	249
55°	198	178	146	133	129	178
65°	91	88	83	83	82	93
75°	35	37	41	42	44	38
85°	5	6	7	10	12	7
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	662.5	662.5	662.5	662.5	662.5
2.5°	660.9	661.7	655.4	662.5	663.3
5°	657.7	657.7	648.2	652.2	652.2
7.5°	653.0	651.4	635.4	635.4	633.9
10°	645.8	641.0	620.3	616.3	613.9
12.5°	635.4	627.5	602.0	594.8	590.1
15°	622.7	610.8	582.1	571.7	566.2
17.5°	604.4	592.4	560.6	546.3	539.9
20°	585.3	567.8	535.1	520.8	511.2
22.5°	564.6	542.3	510.4	492.9	482.6
25°	541.5	517.6	481.0	463.4	453.9
27.5°	516.8	490.5	453.1	433.2	423.6
30°	492.9	462.6	424.4	402.1	391.0
32.5°	467.4	433.2	394.2	371.1	359.9
35°	438.8	405.3	365.5	340.0	327.3
37.5°	411.7	377.4	336.0	309.0	294.6
40°	383.0	348.8	306.6	278.7	263.6
42.5°	352.8	320.1	278.7	246.1	231.7
45°	324.1	289.9	250.0	215.8	199.9
47.5°	293.0	261.2	222.2	187.1	176.0
50°	261.2	231.7	195.1	163.2	157.7
52.5°	230.1	205.4	168.0	147.3	144.9
55°	198.3	177.6	145.7	133.0	129.0
57.5°	168.8	153.7	125.0	118.6	117.1
60°	140.9	128.2	110.7	106.7	104.3
62.5°	113.9	106.7	96.4	94.8	93.2
65°	90.8	87.6	82.8	82.8	82.0
67.5°	71.7	71.7	70.9	72.5	71.7
70°	57.3	58.1	59.7	61.3	62.1
72.5°	45.4	47.8	49.4	51.8	52.6
75°	35.0	37.4	40.6	42.2	43.8
77.5°	25.5	27.9	31.1	33.4	35.0
80°	17.5	19.1	22.3	25.5	27.1
82.5°	11.1	11.9	14.3	17.5	19.1
85°	4.8	5.6	7.2	10.4	11.9
87.5°	0.0	0.0	0.8	3.2	5.6
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	15.94	17.39	16.30	17.70	18.02	14.03	15.48	14.40	15.79	16.11
	3H	16.83	18.13	17.21	18.46	18.82	15.61	16.90	15.98	17.23	17.59
	4H	17.12	18.33	17.52	18.68	19.06	16.20	17.41	16.60	17.76	18.14
	6H	17.27	18.38	17.68	18.75	19.14	16.65	17.77	17.07	18.14	18.53
	8H	17.29	18.35	17.72	18.74	19.14	16.80	17.86	17.23	18.25	18.66
	12H	17.28	18.30	17.71	18.68	19.11	16.90	17.92	17.33	18.30	18.73
4H	2H	16.18	17.39	16.58	17.74	18.12	14.57	15.79	14.97	16.13	16.52
	3H	17.29	18.29	17.71	18.70	19.10	16.35	17.35	16.76	17.75	18.15
	4H	17.68	18.58	18.12	19.00	19.44	17.06	17.96	17.49	18.38	18.82
	6H	17.93	18.70	18.38	19.15	19.61	17.63	18.41	18.09	18.85	19.32
	8H	17.97	18.70	18.43	19.14	19.61	17.82	18.55	18.29	19.00	19.46
	12H	17.98	18.62	18.46	19.10	19.58	17.96	18.61	18.44	19.09	19.56
8H	4H	17.84	18.57	18.31	19.01	19.48	17.27	18.00	17.74	18.44	18.91
	6H	18.15	18.75	18.65	19.25	19.72	17.95	18.54	18.44	19.04	19.52
	8H	18.23	18.77	18.75	19.28	19.77	18.20	18.74	18.72	19.25	19.74
	12H	18.26	18.74	18.78	19.23	19.80	18.41	18.88	18.92	19.38	19.95
12H	4H	17.85	18.49	18.33	18.97	19.45	17.27	17.91	17.75	18.39	18.87
	6H	18.17	18.71	18.69	19.22	19.71	17.95	18.49	18.47	19.00	19.49
	8H	18.28	18.76	18.79	19.25	19.82	18.26	18.73	18.77	19.22	19.79