

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: P1059789

Luminaire Tested: S123RDR-H775D935-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059789  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H775D935-X4F0-XX-UDD-BVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: -

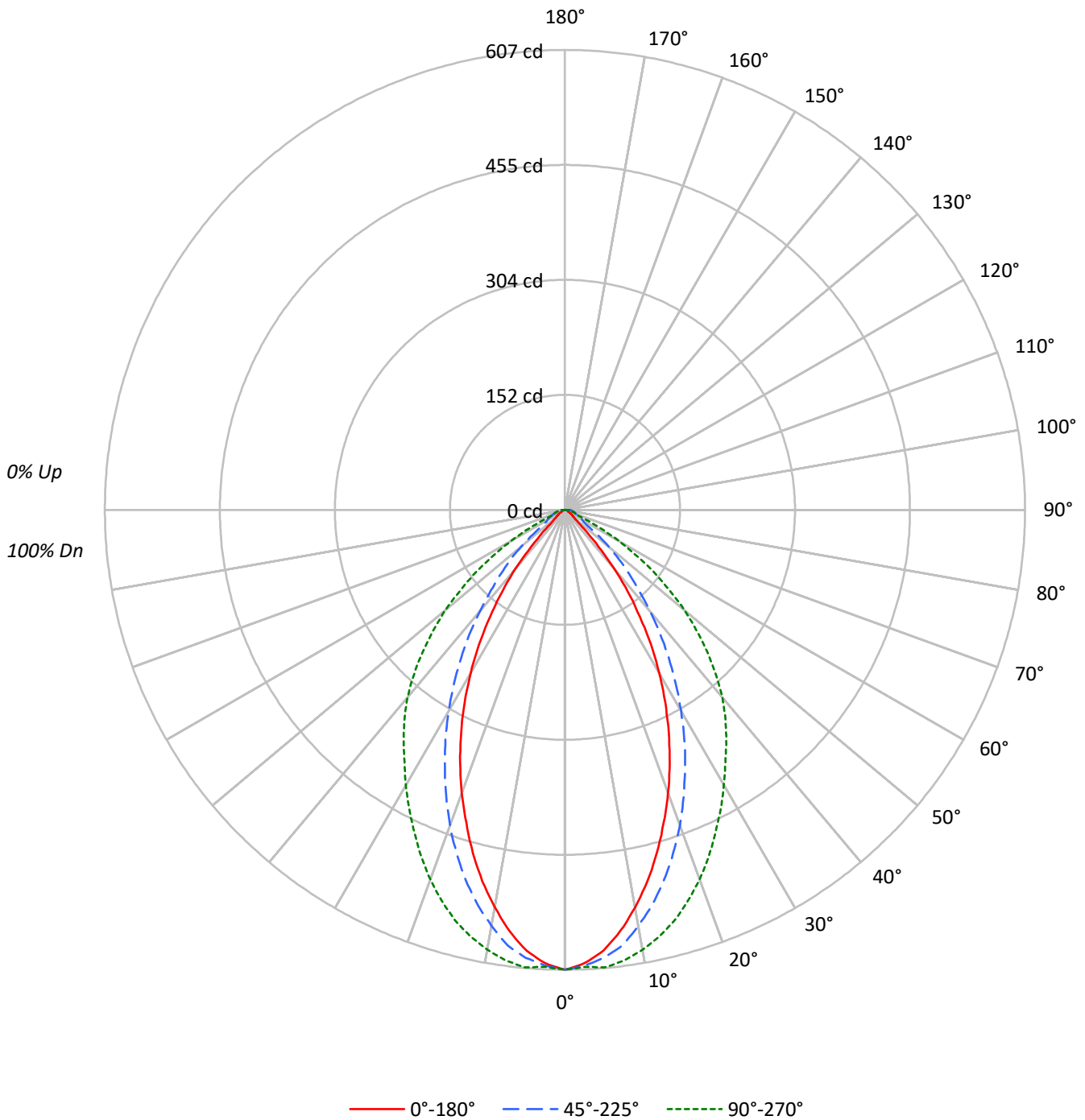
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 728.8 lumens  
Efficiency: N/A  
Efficacy: 31.0 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94  
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	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90				
2	105	99	94	89	102	97	92	88	94	90	86	91	87	85	88	85	83	81				
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73				
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66				
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55				
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50				
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47				
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43				
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40				

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

	0°	45°	90°
0°	7126	7126	7126
5°	6881	6995	7144
10°	6353	6647	7028
15°	5701	6146	6816
20°	4973	5541	6488
25°	4195	4856	6087
30°	3373	4153	5688
35°	2470	3419	5317
40°	1541	2666	4951
45°	583	1986	4411
50°	278	1370	3760
55°	213	751	2907
60°	150	636	1909
65°	111	553	797
70°	110	522	522
75°	145	544	544
80°	216	649	595
85°	431	1078	862

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4411 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.7	7.6
10°-20°	142.9	19.6
20°-30°	176.8	24.3
30°-40°	158.5	21.8
40°-50°	103.9	14.3
50°-60°	52.0	7.1
60°-70°	20.3	2.8
70°-80°	11.5	1.6
80°-90°	7.1	1.0
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°	375.4	51.5
0°-40°	534.0	73.3
0°-60°	689.9	94.7
0°-90°	728.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	728.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	607	607	607	607	607	
5°	584	593	593	600	606	54
15°	469	488	506	539	561	131
25°	324	344	375	428	470	148
35°	172	195	238	310	371	107
45°	35	57	120	205	266	33
55°	10	13	37	100	142	10
65°	4	12	20	26	29	4
75°	3	12	12	12	12	3
85°	3	8	8	8	6	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	606.9	606.9	606.9	606.9	606.9
2.5°	599.0	607.7	602.1	602.9	603.7
5°	583.8	593.4	593.4	599.7	606.1
7.5°	560.7	571.8	579.8	591.0	599.7
10°	532.8	546.3	557.5	577.4	589.4
12.5°	502.4	519.2	533.6	559.9	576.6
15°	469.0	488.1	505.6	539.1	560.7
17.5°	433.1	452.2	475.3	514.4	540.7
20°	398.0	417.1	443.4	487.3	519.2
22.5°	361.3	381.2	409.1	457.8	495.3
25°	323.8	343.7	374.8	428.3	469.8
27.5°	286.3	306.3	341.3	399.6	445.0
30°	248.8	268.8	306.3	368.5	419.5
32.5°	211.3	232.9	272.0	339.8	394.0
35°	172.3	195.4	238.5	310.2	370.9
37.5°	136.4	157.9	206.6	284.7	347.7
40°	100.5	123.6	173.9	260.0	323.0
42.5°	65.4	90.1	144.4	232.9	295.1
45°	35.1	56.6	119.6	205.0	265.6
47.5°	19.1	31.1	96.5	175.5	235.3
50°	15.2	17.5	75.0	149.9	205.8
52.5°	12.8	14.4	53.4	126.0	173.1
55°	10.4	12.8	36.7	100.5	142.0
57.5°	8.8	11.2	28.7	78.2	110.9
60°	6.4	9.6	27.1	57.4	81.3
62.5°	4.8	10.4	23.9	39.9	53.4
65°	4.0	12.0	19.9	26.3	28.7
67.5°	3.2	12.8	17.5	16.7	16.7
70°	3.2	12.0	15.2	14.4	15.2
72.5°	3.2	12.8	13.6	12.8	13.6
75°	3.2	12.0	12.0	12.0	12.0
77.5°	3.2	11.2	11.2	10.4	10.4
80°	3.2	9.6	9.6	9.6	8.8
82.5°	3.2	8.8	8.8	8.8	7.2
85°	3.2	8.0	8.0	8.0	6.4
87.5°	2.4	7.2	8.0	7.2	4.8
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	0.00	0.46	0.00	0.77	1.08	13.43	14.69	13.80	15.00	15.31
	3H	1.53	2.64	1.91	2.97	3.34	13.51	14.62	13.89	14.95	15.32
	4H	2.64	3.67	3.04	4.02	4.41	13.59	14.62	13.99	14.97	15.36
	6H	3.63	4.58	4.04	4.95	5.34	13.69	14.64	14.11	15.01	15.41
	8H	4.11	5.01	4.54	5.40	5.80	13.75	14.65	14.18	15.04	15.45
	12H	4.67	5.52	5.10	5.91	6.34	13.83	14.69	14.27	15.07	15.51
4H	2H	2.43	3.46	2.83	3.81	4.20	13.28	14.32	13.69	14.67	15.05
	3H	4.76	5.60	5.17	6.01	6.41	13.46	14.31	13.87	14.71	15.11
	4H	6.13	6.89	6.57	7.31	7.75	13.61	14.37	14.05	14.79	15.23
	6H	7.22	7.87	7.68	8.32	8.79	13.84	14.49	14.30	14.94	15.41
	8H	7.68	8.29	8.15	8.74	9.21	13.96	14.57	14.44	15.02	15.49
	12H	8.17	8.71	8.66	9.19	9.67	14.14	14.68	14.63	15.16	15.64
8H	4H	7.11	7.72	7.58	8.17	8.64	13.61	14.22	14.08	14.67	15.14
	6H	8.63	9.13	9.13	9.63	10.11	13.95	14.45	14.45	14.95	15.43
	8H	9.41	9.86	9.93	10.37	10.86	14.18	14.63	14.71	15.15	15.64
	12H	10.21	10.61	10.73	11.10	11.68	14.52	14.92	15.04	15.41	15.99
12H	4H	7.28	7.82	7.77	8.31	8.78	13.60	14.13	14.08	14.62	15.09
	6H	8.95	9.40	9.47	9.91	10.41	13.97	14.42	14.49	14.94	15.43
	8H	9.90	10.30	10.42	10.80	11.37	14.28	14.68	14.80	15.17	15.75