

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: P1059771

Luminaire Tested: S123RDR-H775D927-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059771  
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-H775D927-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: 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

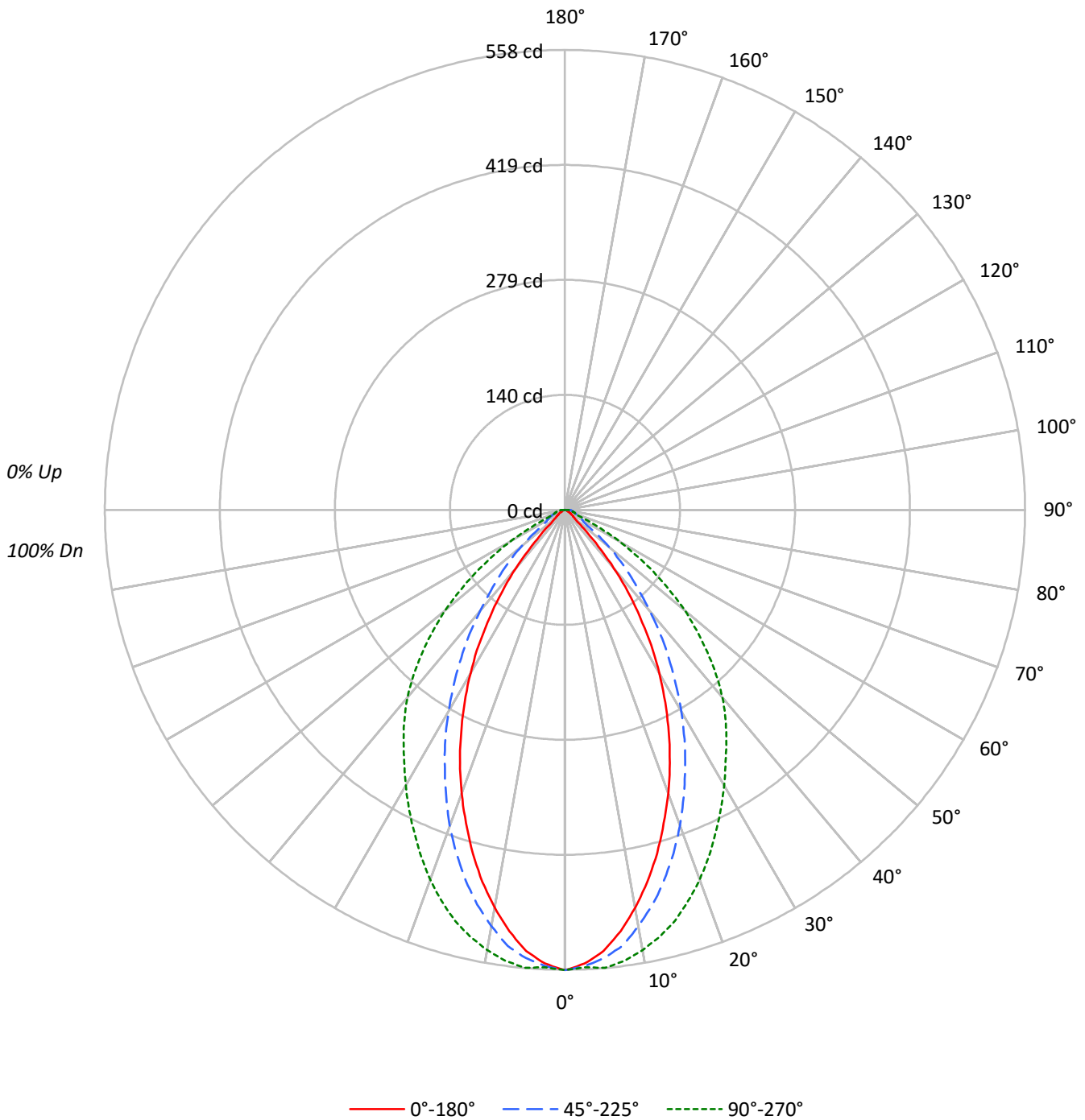
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 670.4 lumens  
Efficiency: N/A  
Efficacy: 28.5 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	90	102	97	92	88	94	90	87	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°	6557	6557	6557
5°	6331	6435	6574
10°	5845	6116	6466
15°	5246	5655	6272
20°	4576	5098	5969
25°	3860	4469	5600
30°	3104	3821	5234
35°	2272	3145	4891
40°	1418	2453	4556
45°	536	1828	4059
50°	254	1260	3458
55°	194	692	2674
60°	139	585	1757
65°	103	508	734
70°	100	477	477
75°	132	499	499
80°	196	595	548
85°	391	984	795

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 4059 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.3	7.6
10°-20°	131.4	19.6
20°-30°	162.7	24.3
30°-40°	145.9	21.8
40°-50°	95.6	14.3
50°-60°	47.9	7.1
60°-70°	18.6	2.8
70°-80°	10.5	1.6
80°-90°	6.5	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°	345.4	51.5
0°-40°	491.3	73.3
0°-60°	634.8	94.7
0°-90°	670.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	670.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	558	558	558	558	558	
5°	537	546	546	552	558	50
15°	432	449	465	496	516	120
25°	298	316	345	394	432	136
35°	158	180	219	285	341	99
45°	32	52	110	189	244	31
55°	10	12	34	92	131	9
65°	4	11	18	24	26	4
75°	3	11	11	11	11	3
85°	3	7	7	7	6	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	558.4	558.4	558.4	558.4	558.4
2.5°	551.1	559.2	554.0	554.7	555.5
5°	537.1	545.9	545.9	551.8	557.7
7.5°	515.9	526.1	533.5	543.7	551.8
10°	490.2	502.6	512.9	531.3	542.3
12.5°	462.3	477.7	490.9	515.1	530.5
15°	431.5	449.1	465.2	496.0	515.9
17.5°	398.5	416.1	437.3	473.3	497.5
20°	366.2	383.8	408.0	448.3	477.7
22.5°	332.4	350.8	376.4	421.2	455.7
25°	297.9	316.3	344.9	394.0	432.2
27.5°	263.4	281.8	314.1	367.6	409.5
30°	228.9	247.3	281.8	339.0	386.0
32.5°	194.5	214.3	250.2	312.6	362.5
35°	158.5	179.8	219.4	285.4	341.2
37.5°	125.5	145.3	190.1	262.0	319.9
40°	92.5	113.7	160.0	239.2	297.2
42.5°	60.2	82.9	132.8	214.3	271.5
45°	32.3	52.1	110.1	188.6	244.4
47.5°	17.6	28.6	88.8	161.4	216.5
50°	13.9	16.1	69.0	138.0	189.3
52.5°	11.7	13.2	49.2	115.9	159.2
55°	9.5	11.7	33.8	92.5	130.6
57.5°	8.1	10.3	26.4	71.9	102.0
60°	5.9	8.8	24.9	52.8	74.8
62.5°	4.4	9.5	22.0	36.7	49.2
65°	3.7	11.0	18.3	24.2	26.4
67.5°	2.9	11.7	16.1	15.4	15.4
70°	2.9	11.0	13.9	13.2	13.9
72.5°	2.9	11.7	12.5	11.7	12.5
75°	2.9	11.0	11.0	11.0	11.0
77.5°	2.9	10.3	10.3	9.5	9.5
80°	2.9	8.8	8.8	8.8	8.1
82.5°	2.9	8.1	8.1	8.1	6.6
85°	2.9	7.3	7.3	7.3	5.9
87.5°	2.2	6.6	7.3	6.6	4.4
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	0.00	0.16	0.00	0.48	0.79	13.14	14.39	13.50	14.71	15.02
	3H	1.22	2.33	1.60	2.66	3.02	13.22	14.33	13.60	14.66	15.02
	4H	2.31	3.35	2.72	3.70	4.08	13.29	14.33	13.70	14.68	15.06
	6H	3.30	4.25	3.71	4.62	5.01	13.40	14.35	13.81	14.72	15.11
	8H	3.78	4.67	4.21	5.06	5.47	13.46	14.35	13.89	14.75	15.15
	12H	4.33	5.19	4.76	5.57	6.00	13.54	14.40	13.97	14.78	15.21
4H	2H	2.14	3.17	2.54	3.52	3.91	12.99	14.03	13.40	14.38	14.76
	3H	4.45	5.29	4.86	5.70	6.10	13.17	14.01	13.58	14.42	14.82
	4H	5.82	6.57	6.25	6.99	7.44	13.32	14.07	13.75	14.49	14.94
	6H	6.90	7.56	7.37	8.00	8.47	13.54	14.19	14.01	14.64	15.11
	8H	7.36	7.97	7.83	8.42	8.89	13.67	14.28	14.14	14.72	15.20
	12H	7.85	8.39	8.34	8.87	9.35	13.84	14.38	14.33	14.86	15.34
8H	4H	6.80	7.41	7.27	7.85	8.33	13.31	13.92	13.79	14.37	14.84
	6H	8.32	8.82	8.82	9.32	9.80	13.65	14.15	14.16	14.65	15.13
	8H	9.09	9.54	9.62	10.06	10.55	13.89	14.33	14.41	14.85	15.34
	12H	9.89	10.29	10.41	10.79	11.36	14.22	14.62	14.74	15.11	15.69
12H	4H	6.97	7.51	7.46	8.00	8.47	13.30	13.84	13.79	14.32	14.80
	6H	8.64	9.09	9.16	9.60	10.09	13.67	14.12	14.19	14.64	15.13
	8H	9.59	9.99	10.11	10.49	11.06	13.98	14.38	14.50	14.88	15.45