

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: P1059747

Luminaire Tested: S123RDR-H775D835-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059747  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-65)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H775D835-X4F0-XX-UDD-SVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: -

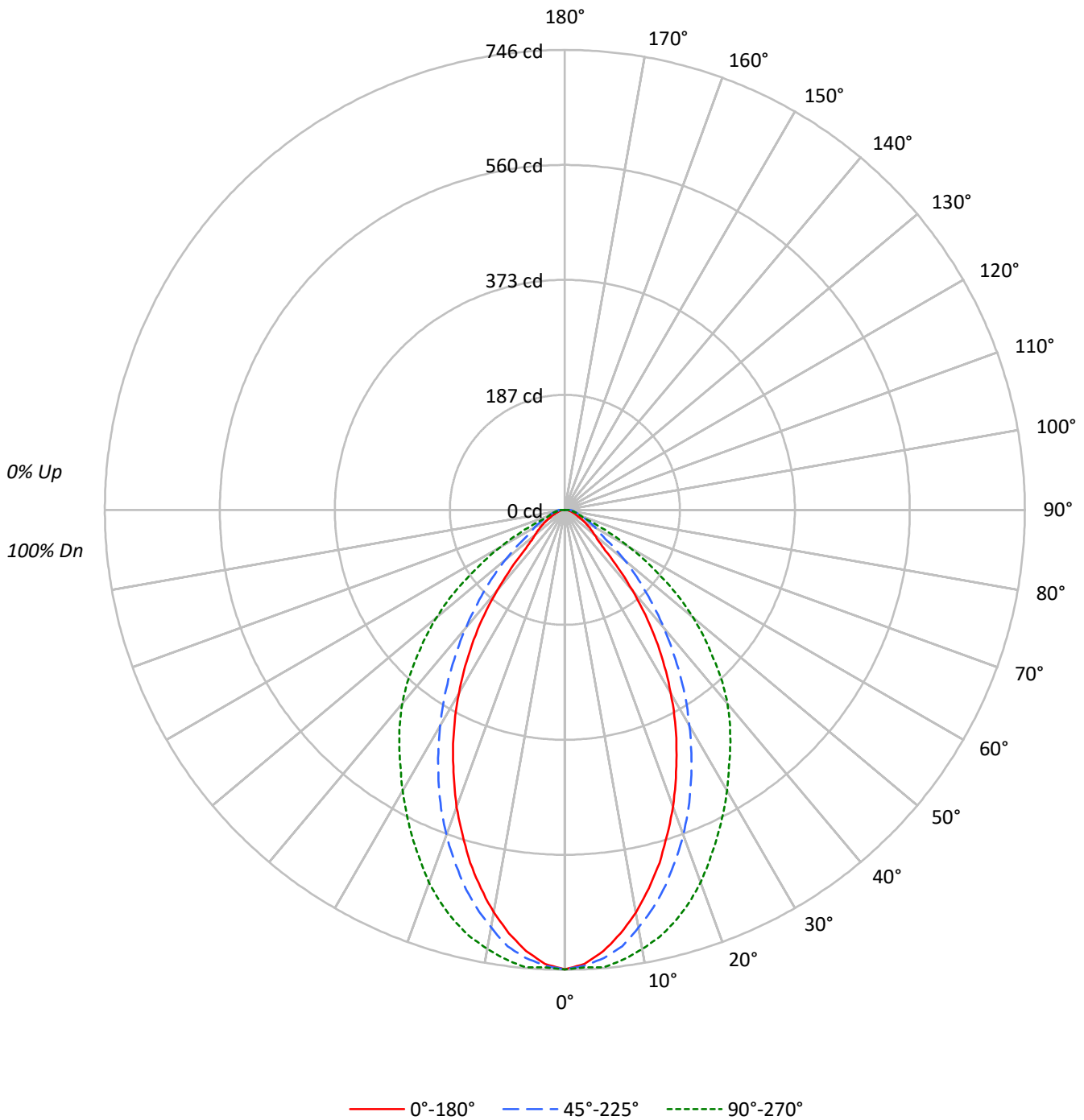
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1000.7 lumens  
Efficiency: N/A  
Efficacy: 42.6 lumens/watt  
Spacing Criteria (0/90/45): 0.82 / 1.08 / 0.98  
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				100
1	111	108	105	102	109	106	103	100	102	99	97	98	96	94	94	93	91	89				89
2	104	98	92	88	102	96	91	87	92	88	85	89	86	83	86	84	81	79				79
3	97	89	82	77	95	87	81	77	84	79	75	82	78	74	79	76	73	71				71
4	90	81	74	68	88	80	73	68	77	72	67	75	70	66	73	69	66	64				64
5	85	74	67	61	83	73	66	61	71	65	60	69	64	60	68	63	59	58				58
6	79	68	61	55	78	67	60	55	66	59	55	64	59	54	63	58	54	52				52
7	74	63	56	51	73	62	55	50	61	55	50	60	54	50	58	53	49	48				48
8	70	58	51	46	69	58	51	46	57	50	46	55	50	46	54	49	45	44				44
9	66	54	47	43	65	54	47	43	53	47	42	52	46	42	51	46	42	40				40
10	62	51	44	39	61	50	44	39	49	43	39	49	43	39	48	43	39	37				37

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

	0°	45°	90°
0°	8754	8754	8754
5°	8470	8601	8777
10°	7907	8205	8624
15°	7205	7667	8399
20°	6410	7013	8042
25°	5556	6275	7583
30°	4659	5475	7132
35°	3690	4660	6704
40°	2612	3832	6289
45°	1538	3029	5659
50°	1151	2300	4956
55°	966	1554	3982
60°	782	1327	2828
65°	617	1131	1492
70°	539	985	924
75°	504	926	880
80°	500	1001	879
85°	620	1495	1118

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5659 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	68.6	6.9
10°-20°	178.3	17.8
20°-30°	227.1	22.7
30°-40°	213.6	21.3
40°-50°	153.8	15.4
50°-60°	88.8	8.9
60°-70°	40.6	4.1
70°-80°	20.3	2.0
80°-90°	9.6	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°	474.0	47.4
0°-40°	687.6	68.7
0°-60°	930.3	93.0
0°-90°	1000.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1000.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	746	746	746	746	746	
5°	719	731	730	737	745	67
15°	593	614	631	666	691	165
25°	429	451	484	538	585	196
35°	257	280	325	400	468	160
45°	93	116	182	274	341	78
55°	47	49	76	144	194	42
65°	22	32	41	45	54	23
75°	11	21	20	19	19	12
85°	5	10	11	10	8	5
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	745.5	745.5	745.5	745.5	745.5
2.5°	737.2	746.4	739.9	740.9	742.7
5°	718.6	730.7	729.7	737.2	744.6
7.5°	692.7	706.6	714.0	725.1	735.3
10°	663.1	678.8	688.1	708.4	723.3
12.5°	628.8	649.2	661.2	688.1	709.4
15°	592.7	614.0	630.7	665.8	690.9
17.5°	551.9	575.1	596.4	638.1	668.6
20°	513.0	535.3	561.2	606.6	643.6
22.5°	470.4	494.5	524.2	572.3	614.0
25°	428.8	451.0	484.3	538.0	585.3
27.5°	387.1	409.3	444.5	503.8	555.6
30°	343.6	366.7	403.8	469.5	526.0
32.5°	301.0	323.2	364.9	436.2	495.5
35°	257.4	279.7	325.1	400.1	467.7
37.5°	214.8	238.0	286.2	370.4	439.9
40°	170.4	195.4	250.0	339.9	410.3
42.5°	128.7	155.6	213.9	308.4	377.8
45°	92.6	115.8	182.4	274.1	340.8
47.5°	72.2	84.3	153.7	238.9	306.5
50°	63.0	64.8	125.9	206.5	271.3
52.5°	54.6	56.5	99.1	176.0	234.3
55°	47.2	49.1	75.9	144.5	194.5
57.5°	39.8	42.6	63.0	114.8	156.5
60°	33.3	37.0	56.5	88.0	120.4
62.5°	26.9	33.3	48.2	64.8	86.1
65°	22.2	31.5	40.7	45.4	53.7
67.5°	18.5	28.7	34.3	32.4	31.5
70°	15.7	25.9	28.7	25.9	26.9
72.5°	13.0	24.1	24.1	22.2	22.2
75°	11.1	21.3	20.4	19.4	19.4
77.5°	9.3	18.5	17.6	16.7	15.7
80°	7.4	14.8	14.8	13.9	13.0
82.5°	6.5	12.0	12.0	12.0	10.2
85°	4.6	10.2	11.1	10.2	8.3
87.5°	3.7	9.3	9.3	8.3	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	7.51	8.83	7.87	9.14	9.45	14.87	16.19	15.23	16.50	16.82
	3H	8.89	10.06	9.27	10.39	10.76	15.10	16.27	15.48	16.60	16.96
	4H	9.45	10.54	9.85	10.89	11.27	15.21	16.31	15.62	16.66	17.04
	6H	9.88	10.88	10.30	11.26	11.65	15.33	16.33	15.74	16.70	17.10
	8H	10.06	11.01	10.49	11.40	11.81	15.38	16.33	15.81	16.72	17.13
	12H	10.21	11.12	10.65	11.51	11.94	15.44	16.35	15.87	16.73	17.16
4H	2H	8.61	9.70	9.01	10.05	10.43	14.83	15.92	15.23	16.27	16.65
	3H	10.27	11.16	10.68	11.56	11.97	15.19	16.08	15.60	16.49	16.89
	4H	11.08	11.88	11.51	12.30	12.74	15.38	16.18	15.82	16.60	17.05
	6H	11.71	12.41	12.18	12.85	13.32	15.61	16.30	16.07	16.75	17.22
	8H	11.95	12.59	12.42	13.04	13.51	15.72	16.36	16.18	16.81	17.28
	12H	12.16	12.73	12.65	13.22	13.69	15.84	16.42	16.33	16.90	17.37
8H	4H	11.52	12.17	11.99	12.61	13.08	15.42	16.07	15.89	16.51	16.99
	6H	12.43	12.96	12.93	13.46	13.94	15.75	16.28	16.25	16.78	17.26
	8H	12.85	13.33	13.37	13.84	14.33	15.94	16.42	16.46	16.93	17.42
	12H	13.27	13.69	13.78	14.18	14.75	16.19	16.61	16.70	17.11	17.68
12H	4H	11.58	12.15	12.06	12.63	13.11	15.41	15.98	15.90	16.47	16.94
	6H	12.56	13.04	13.09	13.56	14.05	15.77	16.24	16.29	16.76	17.25
	8H	13.10	13.52	13.62	14.02	14.59	16.02	16.44	16.54	16.94	17.51