

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: P1059756

Luminaire Tested: S123RDR-H775D840-X4F0-XX-UDD-SVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059756  
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-H775D840-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: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

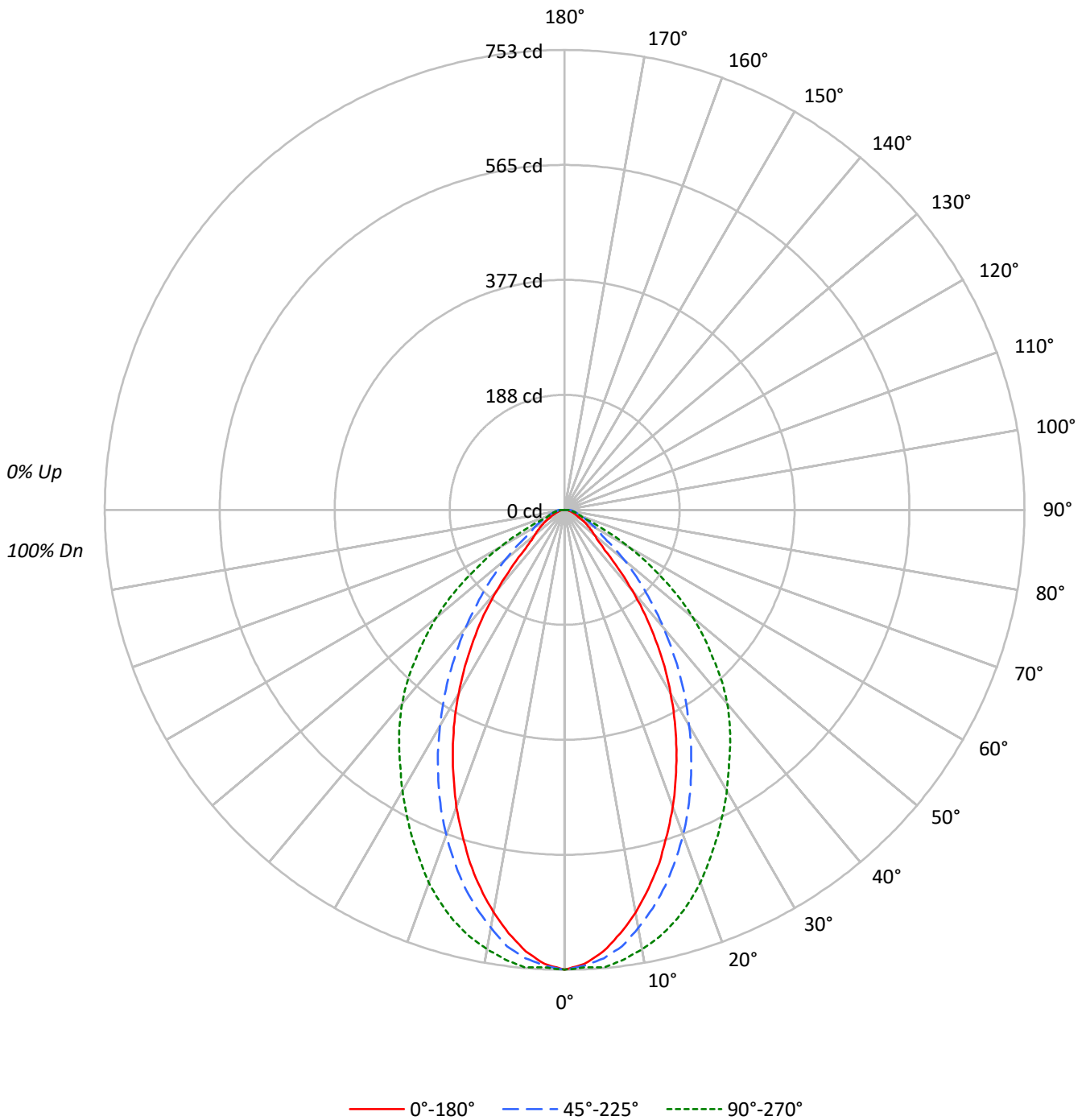
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1010.6 lumens  
Efficiency: N/A  
Efficacy: 43.0 lumens/watt  
Spacing Criteria (0/90/45): 0.83 / 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°	8840	8840	8840
5°	8554	8686	8863
10°	7984	8286	8709
15°	7276	7743	8482
20°	6474	7082	8122
25°	5610	6337	7658
30°	4705	5529	7203
35°	3727	4706	6770
40°	2638	3870	6351
45°	1553	3059	5716
50°	1162	2324	5005
55°	977	1570	4021
60°	791	1339	2856
65°	622	1142	1506
70°	546	996	930
75°	508	935	889
80°	507	1014	886
85°	633	1509	1132

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 5716 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	69.3	6.9
10°-20°	180.1	17.8
20°-30°	229.3	22.7
30°-40°	215.7	21.3
40°-50°	155.3	15.4
50°-60°	89.7	8.9
60°-70°	41.0	4.1
70°-80°	20.5	2.0
80°-90°	9.7	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°	478.7	47.4
0°-40°	694.4	68.7
0°-60°	939.5	93.0
0°-90°	1010.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1010.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	753	753	753	753	753	
5°	726	738	737	744	752	67
15°	598	620	637	672	698	167
25°	433	455	489	543	591	198
35°	260	282	328	404	472	161
45°	94	117	184	277	344	79
55°	48	50	77	146	196	43
65°	22	32	41	46	54	23
75°	11	22	21	20	20	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°	752.8	752.8	752.8	752.8	752.8
2.5°	744.4	753.8	747.2	748.2	750.0
5°	725.7	737.9	736.9	744.4	751.9
7.5°	699.5	713.6	721.0	732.3	742.6
10°	669.6	685.5	694.9	715.4	730.4
12.5°	635.0	655.6	667.7	694.9	716.4
15°	598.5	620.0	636.9	672.4	697.7
17.5°	557.4	580.8	602.3	644.4	675.2
20°	518.1	540.6	566.7	612.6	650.0
22.5°	475.1	499.4	529.3	578.0	620.0
25°	433.0	455.4	489.1	543.4	591.1
27.5°	390.9	413.4	448.9	508.8	561.1
30°	347.0	370.3	407.8	474.2	531.2
32.5°	303.9	326.4	368.5	440.5	500.3
35°	260.0	282.4	328.3	404.0	472.3
37.5°	217.0	240.3	289.0	374.1	444.2
40°	172.1	197.3	252.5	343.2	414.3
42.5°	130.0	157.1	216.0	311.4	381.6
45°	93.5	116.9	184.2	276.8	344.2
47.5°	72.9	85.1	155.2	241.3	309.6
50°	63.6	65.5	127.2	208.6	274.0
52.5°	55.2	57.0	100.1	177.7	236.6
55°	47.7	49.6	76.7	145.9	196.4
57.5°	40.2	43.0	63.6	116.0	158.1
60°	33.7	37.4	57.0	88.8	121.6
62.5°	27.1	33.7	48.6	65.5	87.0
65°	22.4	31.8	41.1	45.8	54.2
67.5°	18.7	29.0	34.6	32.7	31.8
70°	15.9	26.2	29.0	26.2	27.1
72.5°	13.1	24.3	24.3	22.4	22.4
75°	11.2	21.5	20.6	19.6	19.6
77.5°	9.4	18.7	17.8	16.8	15.9
80°	7.5	15.0	15.0	14.0	13.1
82.5°	6.5	12.2	12.2	12.2	10.3
85°	4.7	10.3	11.2	10.3	8.4
87.5°	3.7	9.4	9.4	8.4	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	7.54	8.86	7.90	9.17	9.49	14.91	16.23	15.27	16.54	16.85
	3H	8.93	10.10	9.31	10.43	10.79	15.14	16.31	15.52	16.64	17.00
	4H	9.48	10.57	9.88	10.92	11.31	15.25	16.34	15.65	16.69	17.08
	6H	9.92	10.92	10.33	11.29	11.69	15.36	16.37	15.78	16.74	17.13
	8H	10.09	11.04	10.52	11.44	11.84	15.42	16.37	15.85	16.76	17.16
	12H	10.25	11.16	10.68	11.54	11.97	15.48	16.38	15.91	16.77	17.20
4H	2H	8.64	9.73	9.04	10.08	10.46	14.86	15.95	15.27	16.31	16.69
	3H	10.30	11.20	10.71	11.60	12.00	15.22	16.12	15.64	16.52	16.92
	4H	11.11	11.91	11.55	12.33	12.77	15.42	16.22	15.85	16.64	17.08
	6H	11.75	12.44	12.21	12.89	13.35	15.65	16.34	16.11	16.78	17.25
	8H	11.99	12.63	12.45	13.08	13.55	15.75	16.40	16.22	16.84	17.32
	12H	12.20	12.77	12.69	13.25	13.73	15.88	16.45	16.37	16.93	17.41
8H	4H	11.56	12.20	12.02	12.65	13.12	15.46	16.10	15.93	16.55	17.02
	6H	12.47	13.00	12.97	13.50	13.98	15.79	16.32	16.29	16.81	17.29
	8H	12.89	13.37	13.41	13.88	14.37	15.98	16.45	16.50	16.97	17.46
	12H	13.31	13.73	13.82	14.23	14.80	16.23	16.65	16.74	17.14	17.71
12H	4H	11.61	12.18	12.10	12.67	13.14	15.45	16.02	15.93	16.50	16.98
	6H	12.60	13.08	13.13	13.60	14.09	15.80	16.28	16.32	16.79	17.29
	8H	13.15	13.57	13.66	14.06	14.63	16.06	16.48	16.57	16.98	17.55