

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: P1059767

Luminaire Tested: S123RDR-H775D850-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059767  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-67 )  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-H775D850-X4F0-XX-UDD-WVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

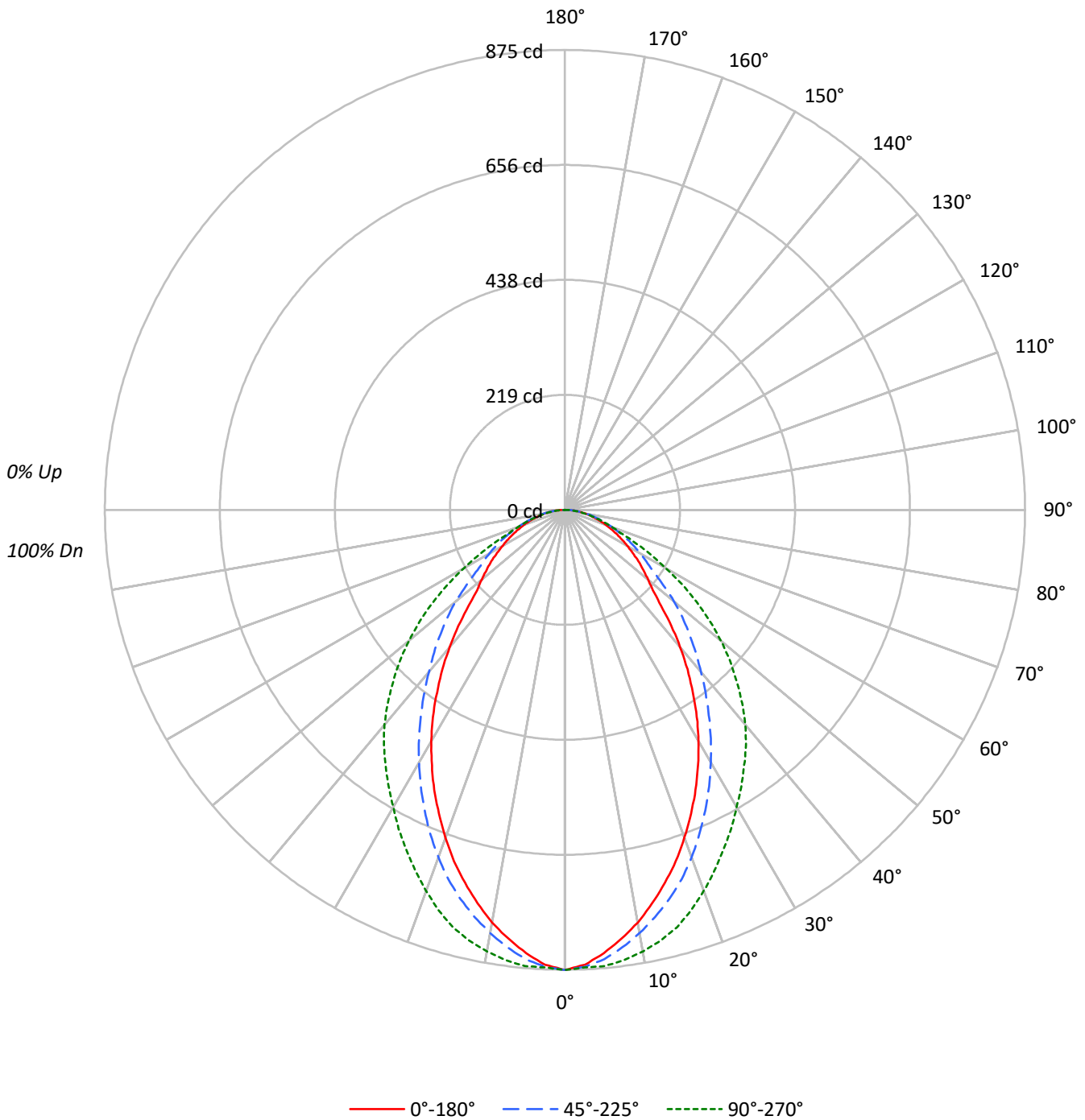
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1581.3 lumens  
Efficiency: N/A  
Efficacy: 67.3 lumens/watt  
Spacing Criteria (0/90/45): 0.93 / 1.12 / 1.1  
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										
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	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	100	100	100	100	100														
1	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87	87	87	87	87	87	87														
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75	75	75	75	75	75	75														
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65	65	65	65	65	65	65														
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57	57	57	57	57	57	57														
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51	51	51	51	51	51	51														
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45	45	45	45	45	45	45														
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41	41	41	41	41	41	41														
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37	37	37	37	37	37	37														
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34	34	34	34	34	34	34														
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31	31	31	31	31	31	31														

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

	0°	45°	90°
0°	10279	10279	10279
5°	9980	10113	10270
10°	9508	9752	10168
15°	8933	9319	9994
20°	8297	8797	9644
25°	7620	8178	9242
30°	6888	7528	8850
35°	6077	6841	8518
40°	5222	6167	8181
45°	4294	5556	7669
50°	3769	4949	7068
55°	3488	4223	6260
60°	3206	3880	5183
65°	2995	3565	4079
70°	2819	3241	3241
75°	2654	2981	2795
80°	2495	2705	2360
85°	2344	2627	1792

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 7669 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	81.0	5.1
10°-20°	217.0	13.7
20°-30°	294.2	18.6
30°-40°	307.6	19.5
40°-50°	266.8	16.9
50°-60°	198.5	12.6
60°-70°	127.4	8.1
70°-80°	68.3	4.3
80°-90°	20.6	1.3
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°	592.2	37.4
0°-40°	899.8	56.9
0°-60°	1365.1	86.3
0°-90°	1581.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1581.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	875	875	875	875	875	
5°	847	861	858	864	871	79
15°	735	752	767	797	822	206
25°	588	606	631	673	713	270
35°	424	444	477	538	594	265
45°	259	278	335	406	462	203
55°	170	174	206	265	306	152
65°	108	117	128	136	147	107
75°	58	68	66	63	62	62
85°	17	22	20	16	13	20
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	875.4	875.4	875.4	875.4	875.4
2.5°	866.2	878.5	870.3	870.3	871.3
5°	846.7	861.1	858.0	864.1	871.3
7.5°	823.1	838.5	839.5	853.9	864.1
10°	797.4	812.8	817.9	838.5	852.8
12.5°	766.6	784.1	793.3	819.0	839.5
15°	734.8	752.3	766.6	797.4	822.1
17.5°	701.0	718.4	736.9	771.8	798.4
20°	664.0	682.5	704.0	738.9	771.8
22.5°	626.0	645.5	668.1	706.1	743.0
25°	588.1	606.5	631.2	673.2	713.3
27.5°	548.0	567.5	593.2	639.4	684.5
30°	508.0	527.5	555.2	604.5	652.7
32.5°	467.0	486.5	516.2	571.6	624.0
35°	423.9	444.4	477.2	537.8	594.2
37.5°	382.8	402.3	439.2	506.0	565.5
40°	340.7	361.3	402.3	474.1	533.7
42.5°	299.7	320.2	368.4	440.3	498.8
45°	258.6	278.1	334.6	406.4	461.8
47.5°	226.8	241.2	302.8	370.5	425.9
50°	206.3	211.4	270.9	335.6	386.9
52.5°	187.8	191.9	236.0	300.7	346.9
55°	170.4	174.5	206.3	264.8	305.8
57.5°	152.9	158.0	183.7	227.8	264.8
60°	136.5	142.7	165.2	195.0	220.7
62.5°	122.1	129.3	146.8	165.2	182.7
65°	107.8	117.0	128.3	136.5	146.8
67.5°	94.4	104.7	110.8	112.9	113.9
70°	82.1	92.4	94.4	94.4	94.4
72.5°	69.8	81.1	79.0	78.0	77.0
75°	58.5	67.7	65.7	62.6	61.6
77.5°	47.2	55.4	52.3	50.3	47.2
80°	36.9	43.1	40.0	38.0	34.9
82.5°	27.7	31.8	28.7	26.7	23.6
85°	17.4	21.6	19.5	16.4	13.3
87.5°	9.2	12.3	10.3	9.2	5.1
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	14.88	16.36	15.25	16.68	16.99	17.64	19.12	18.00	19.43	19.75
	3H	16.59	17.92	16.97	18.25	18.61	18.66	19.99	19.04	20.31	20.68
	4H	17.25	18.50	17.65	18.85	19.23	19.02	20.27	19.42	20.62	21.00
	6H	17.75	18.90	18.16	19.27	19.66	19.28	20.43	19.69	20.80	21.19
	8H	17.93	19.02	18.36	19.41	19.82	19.35	20.44	19.78	20.83	21.24
	12H	18.06	19.10	18.49	19.49	19.92	19.38	20.43	19.82	20.81	21.24
4H	2H	15.66	16.90	16.06	17.25	17.63	17.91	19.15	18.31	19.50	19.88
	3H	17.58	18.62	17.99	19.02	19.42	19.16	20.20	19.57	20.60	21.00
	4H	18.39	19.32	18.83	19.74	20.18	19.65	20.58	20.08	21.00	21.43
	6H	19.03	19.84	19.49	20.28	20.74	20.03	20.84	20.49	21.28	21.74
	8H	19.26	20.02	19.72	20.46	20.93	20.14	20.90	20.61	21.34	21.81
	12H	19.43	20.11	19.92	20.59	21.06	20.21	20.89	20.70	21.37	21.84
8H	4H	18.71	19.47	19.18	19.91	20.38	19.84	20.60	20.31	21.04	21.51
	6H	19.50	20.13	20.00	20.62	21.10	20.33	20.95	20.83	21.45	21.92
	8H	19.83	20.39	20.35	20.90	21.39	20.51	21.07	21.02	21.58	22.07
	12H	20.11	20.60	20.62	21.10	21.66	20.64	21.13	21.15	21.63	22.19
12H	4H	18.74	19.41	19.22	19.89	20.36	19.86	20.53	20.34	21.01	21.48
	6H	19.56	20.12	20.07	20.63	21.12	20.37	20.93	20.88	21.44	21.93
	8H	19.95	20.45	20.46	20.94	21.51	20.60	21.09	21.11	21.58	22.15