

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1059119

Luminaire Tested: S123RDRP-S1165D850-X4F0-XX-UDD-WVL-S

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1059119  
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: S123RDRP-S1165D850-X4F0-XX-UDD-WVL-S  
Description: DEFINE 3 SILVER REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

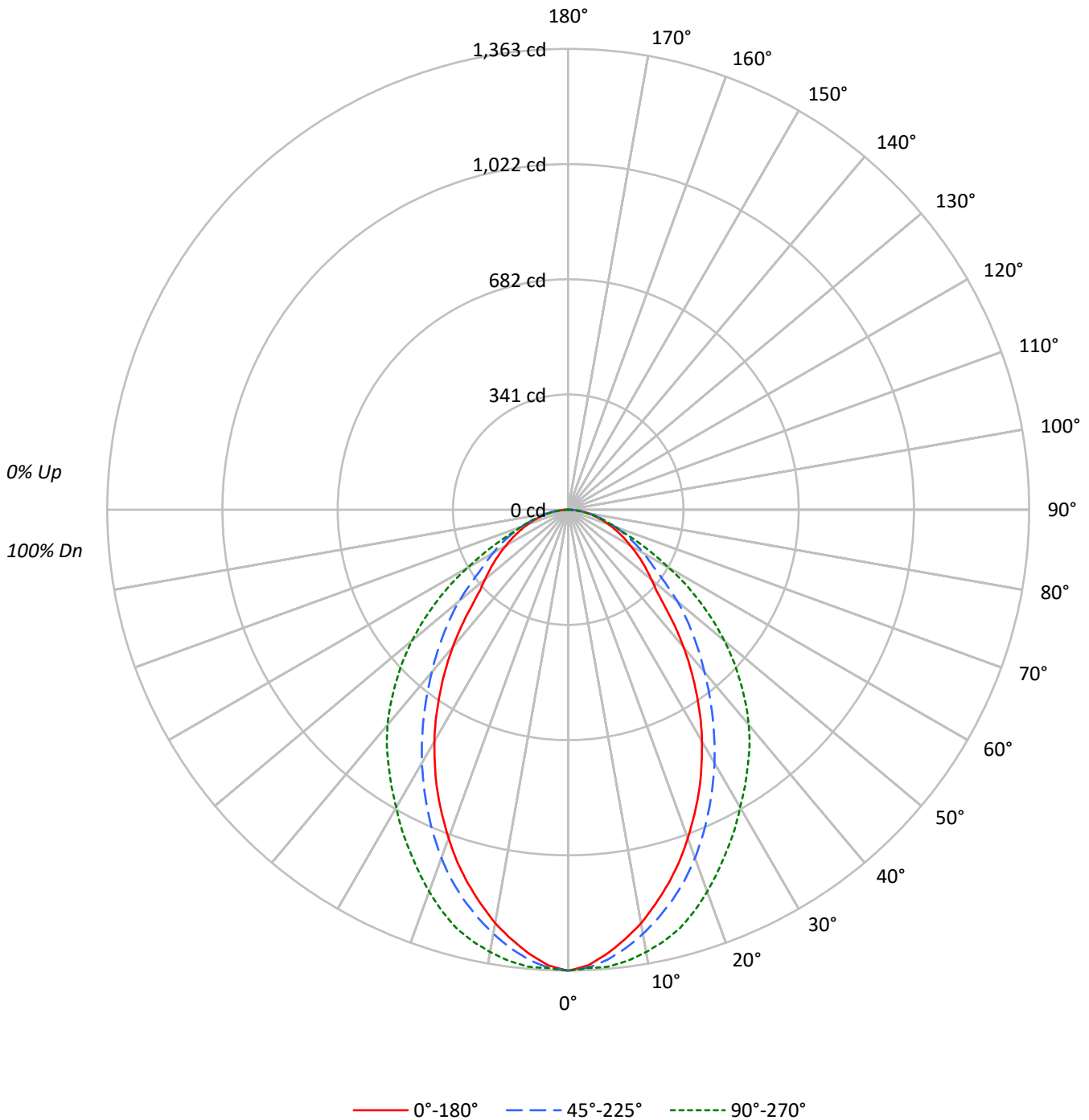
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2462.8 lumens  
Efficiency: N/A  
Efficacy: 58.9 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): 41.8  
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	110	106	102	99	108	104	100	97	100	97	94	96	93	91	92	90	89	87				87
2	102	94	88	83	99	92	87	82	89	84	80	86	82	78	83	80	77	75				75
3	94	84	77	71	91	83	76	71	80	74	69	77	72	68	75	71	67	65				65
4	87	76	68	62	84	74	67	61	72	66	61	70	64	60	68	63	59	57				57
5	80	69	60	54	78	68	60	54	66	59	54	64	58	53	62	57	53	51				51
6	75	63	54	48	73	62	54	48	60	53	48	58	52	47	57	51	47	45				45
7	70	57	49	44	68	56	49	43	55	48	43	54	47	43	52	47	43	41				41
8	65	53	45	39	64	52	45	39	51	44	39	50	43	39	48	43	39	37				37
9	61	49	41	36	60	48	41	36	47	40	36	46	40	36	45	39	35	34				34
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31				31

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

	0°	45°	90°
0°	16010	16010	16010
5°	15543	15750	15995
10°	14808	15189	15837
15°	13912	14515	15564
20°	12922	13702	15020
25°	11867	12736	14393
30°	10728	11724	13784
35°	9462	10654	13265
40°	8135	9605	12740
45°	6689	8654	11945
50°	5870	7709	11008
55°	5431	6578	9751
60°	4993	6043	8069
65°	4662	5551	6352
70°	4391	5047	5047
75°	4133	4641	4351
80°	3888	4213	3672
85°	3665	4096	2802

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 11945 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.1	5.1
10°-20°	338.0	13.7
20°-30°	458.2	18.6
30°-40°	479.1	19.5
40°-50°	415.5	16.9
50°-60°	309.1	12.6
60°-70°	198.3	8.1
70°-80°	106.4	4.3
80°-90°	32.1	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°	922.3	37.4
0°-40°	1401.3	56.9
0°-60°	2126.0	86.3
0°-90°	2462.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2462.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1363	1363	1363	1363	1363	
5°	1319	1341	1336	1346	1357	123
15°	1144	1172	1194	1242	1280	321
25°	916	945	983	1048	1111	420
35°	660	692	743	838	925	412
45°	403	433	521	633	719	317
55°	265	272	321	412	476	237
65°	168	182	200	213	229	167
75°	91	106	102	98	96	97
85°	27	34	30	26	21	31
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1363.4	1363.4	1363.4	1363.4	1363.4
2.5°	1349.0	1368.2	1355.4	1355.4	1357.0
5°	1318.6	1341.0	1336.2	1345.8	1357.0
7.5°	1281.9	1305.9	1307.4	1329.8	1345.8
10°	1241.9	1265.9	1273.9	1305.9	1328.2
12.5°	1194.0	1221.1	1235.5	1275.5	1307.4
15°	1144.4	1171.6	1194.0	1241.9	1280.3
17.5°	1091.7	1118.8	1147.6	1202.0	1243.5
20°	1034.1	1062.9	1096.5	1150.8	1202.0
22.5°	975.0	1005.4	1040.5	1099.7	1157.2
25°	915.9	944.6	983.0	1048.5	1110.9
27.5°	853.5	883.9	923.8	995.8	1066.1
30°	791.2	821.6	864.7	941.4	1016.6
32.5°	727.2	757.6	804.0	890.3	971.8
35°	660.1	692.1	743.2	837.5	925.4
37.5°	596.2	626.6	684.1	788.0	880.7
40°	530.7	562.6	626.6	738.4	831.1
42.5°	466.7	498.7	573.8	685.7	776.8
45°	402.8	433.2	521.1	632.9	719.3
47.5°	353.2	375.6	471.5	577.0	663.3
50°	321.3	329.3	422.0	522.7	602.6
52.5°	292.5	298.9	367.6	468.3	540.2
55°	265.3	271.7	321.3	412.4	476.3
57.5°	238.2	246.1	286.1	354.8	412.4
60°	212.6	222.2	257.3	303.7	343.6
62.5°	190.2	201.4	228.6	257.3	284.5
65°	167.8	182.2	199.8	212.6	228.6
67.5°	147.0	163.0	172.6	175.8	177.4
70°	127.9	143.9	147.0	147.0	147.0
72.5°	108.7	126.3	123.1	121.5	119.9
75°	91.1	105.5	102.3	97.5	95.9
77.5°	73.5	86.3	81.5	78.3	73.5
80°	57.5	67.1	62.3	59.1	54.3
82.5°	43.2	49.5	44.8	41.6	36.8
85°	27.2	33.6	30.4	25.6	20.8
87.5°	14.4	19.2	16.0	14.4	8.0
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	16.42	17.90	16.79	18.22	18.53	19.18	20.66	19.54	20.97	21.29
	3H	18.13	19.46	18.51	19.79	20.15	20.20	21.53	20.58	21.85	22.22
	4H	18.79	20.04	19.19	20.39	20.77	20.56	21.81	20.96	22.16	22.54
	6H	19.29	20.44	19.70	20.81	21.20	20.82	21.97	21.23	22.33	22.73
	8H	19.47	20.56	19.90	20.95	21.36	20.89	21.98	21.32	22.37	22.77
	12H	19.60	20.64	20.03	21.03	21.46	20.92	21.97	21.35	22.35	22.78
4H	2H	17.20	18.44	17.60	18.79	19.17	19.45	20.69	19.85	21.04	21.42
	3H	19.12	20.16	19.53	20.56	20.96	20.70	21.73	21.11	22.14	22.54
	4H	19.93	20.86	20.37	21.28	21.72	21.19	22.12	21.62	22.53	22.97
	6H	20.57	21.38	21.03	21.82	22.28	21.57	22.38	22.03	22.82	23.28
	8H	20.80	21.56	21.26	22.00	22.47	21.68	22.44	22.15	22.88	23.35
	12H	20.97	21.65	21.46	22.13	22.60	21.75	22.43	22.23	22.91	23.38
8H	4H	20.25	21.01	20.72	21.45	21.92	21.38	22.14	21.84	22.58	23.05
	6H	21.04	21.67	21.54	22.16	22.64	21.87	22.49	22.37	22.98	23.46
	8H	21.37	21.93	21.89	22.44	22.93	22.04	22.60	22.56	23.11	23.60
	12H	21.65	22.15	22.16	22.64	23.20	22.18	22.67	22.69	23.17	23.73
12H	4H	20.28	20.95	20.76	21.43	21.90	21.40	22.07	21.88	22.55	23.02
	6H	21.10	21.66	21.61	22.17	22.66	21.90	22.47	22.42	22.98	23.46
	8H	21.49	21.99	22.00	22.48	23.05	22.13	22.63	22.65	23.12	23.69