

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: P1059118

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2024
Report Number: P1059118
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
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-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE
LOUVER WITH DIFFUSER
CORE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

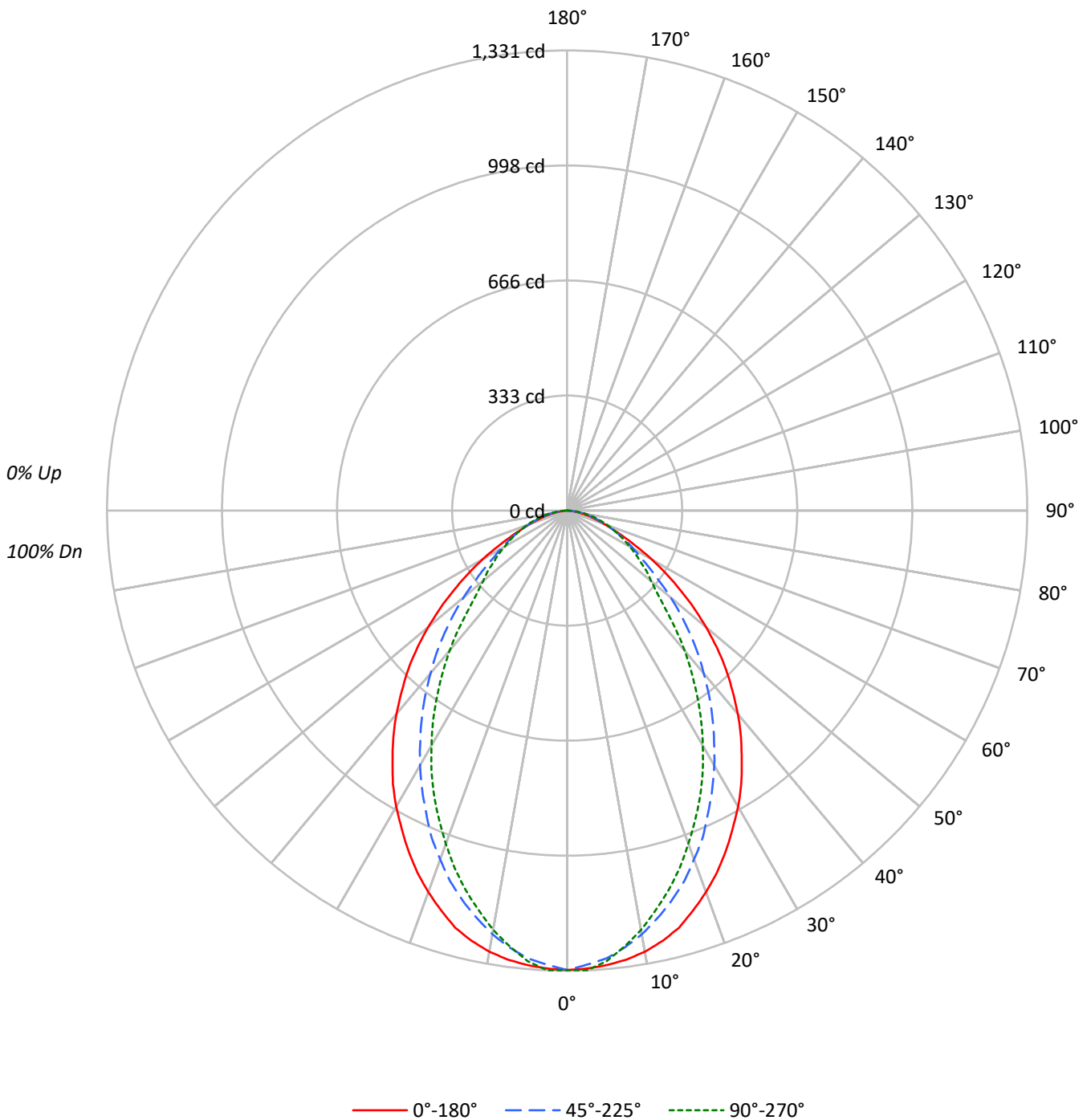
Lumens per Lamp: N/A
Luminaire Lumens: 2324.5 lumens
Efficiency: N/A
Efficacy: 55.6 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 41.8
Input Voltage (V): 120
Input Current (A_{in}): 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

TEST NUMBER: P1059118

CATALOG NUMBER: S123RDRP-S1165D850-X4F0-XX-UDD-WVL-B

Luminous Intensity Polar Plot



TEST NUMBER: P1059118

CATALOG NUMBER: S123RDRP-S1165D850-X4F0-XX-UDD-WVL-B

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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15606	15606	15606
5°	15552	15327	15421
10°	15447	14838	14685
15°	15186	14195	13806
20°	14672	13413	12815
25°	14073	12500	11797
30°	13407	11544	10634
35°	12618	10510	9411
40°	11777	9427	8104
45°	10796	8330	6657
50°	9571	7150	5778
55°	8142	5984	5298
60°	6639	5214	4915
65°	5060	4615	4571
70°	3948	4113	4278
75°	3189	3698	3988
80°	2374	3023	3672
85°	1293	1940	3234

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 10796 cd/sqm



TEST NUMBER: P1059118

CATALOG NUMBER: S123RDRP-S1165D850-X4F0-XX-UDD-WVL-B

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.4	5.3
10°-20°	331.9	14.3
20°-30°	451.2	19.4
30°-40°	467.8	20.1
40°-50°	394.5	17.0
50°-60°	280.0	12.0
60°-70°	171.2	7.4
70°-80°	85.2	3.7
80°-90°	19.3	0.8
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°	906.5	39.0
0°-40°	1374.3	59.1
0°-60°	2048.8	88.1
0°-90°	2324.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2324.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1329	1329	1329	1329	1329	
5°	1319	1319	1300	1308	1308	125
15°	1249	1225	1168	1147	1136	351
25°	1086	1038	965	930	910	499
35°	880	813	733	682	656	550
45°	650	581	502	433	401	499
55°	398	356	292	267	259	357
65°	182	176	166	166	164	186
75°	70	75	82	85	88	76
85°	10	11	14	21	24	13
90°	0	0	0	0	0	



TEST NUMBER: P1059118

CATALOG NUMBER: S123RDRP-S1165D850-X4F0-XX-UDD-WVL-B

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1329.0	1329.0	1329.0	1329.0	1329.0
2.5°	1325.8	1327.4	1314.6	1329.0	1330.6
5°	1319.4	1319.4	1300.3	1308.3	1308.3
7.5°	1309.9	1306.7	1274.7	1274.7	1271.5
10°	1295.5	1285.9	1244.4	1236.4	1231.6
12.5°	1274.7	1258.7	1207.6	1193.2	1183.7
15°	1249.2	1225.2	1167.7	1146.9	1135.7
17.5°	1212.4	1188.5	1124.6	1095.8	1083.0
20°	1174.1	1138.9	1073.4	1044.7	1025.5
22.5°	1132.5	1087.8	1023.9	988.8	968.0
25°	1086.2	1038.3	964.8	929.7	910.5
27.5°	1036.7	984.0	908.9	869.0	849.8
30°	988.8	928.1	851.4	806.7	784.3
32.5°	937.7	869.0	790.7	744.4	722.0
35°	880.2	813.1	733.2	682.1	656.5
37.5°	825.8	757.2	674.1	619.8	591.0
40°	768.3	699.7	615.0	559.1	528.7
42.5°	707.6	642.1	559.1	493.6	464.8
45°	650.1	581.4	501.6	432.9	400.9
47.5°	587.8	523.9	445.7	375.4	353.0
50°	523.9	464.8	391.4	327.5	316.3
52.5°	461.6	412.1	337.0	295.5	290.7
55°	397.7	356.2	292.3	266.8	258.8
57.5°	338.6	308.3	250.8	238.0	234.8
60°	282.7	257.2	222.0	214.0	209.3
62.5°	228.4	214.0	193.3	190.1	186.9
65°	182.1	175.7	166.1	166.1	164.5
67.5°	143.8	143.8	142.2	145.4	143.8
70°	115.0	116.6	119.8	123.0	124.6
72.5°	91.1	95.8	99.0	103.8	105.4
75°	70.3	75.1	81.5	84.7	87.9
77.5°	51.1	55.9	62.3	67.1	70.3
80°	35.1	38.3	44.7	51.1	54.3
82.5°	22.4	24.0	28.8	35.1	38.3
85°	9.6	11.2	14.4	20.8	24.0
87.5°	0.0	0.0	1.6	6.4	11.2
90°	0.0	0.0	0.0	0.0	0.0



TEST NUMBER: P1059118
 CATALOG NUMBER: S123RDRP-S1165D850-X4F0-XX-UDD-WVL-B

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	18.36	19.81	18.72	20.12	20.43	16.45	17.90	16.82	18.22	18.53
	3H	19.25	20.55	19.63	20.88	21.24	18.03	19.32	18.40	19.65	20.01
	4H	19.54	20.75	19.94	21.10	21.48	18.62	19.83	19.02	20.18	20.56
	6H	19.68	20.80	20.10	21.17	21.56	19.07	20.19	19.49	20.56	20.95
	8H	19.71	20.77	20.14	21.16	21.56	19.22	20.28	19.65	20.67	21.08
	12H	19.70	20.72	20.13	21.10	21.53	19.32	20.34	19.75	20.72	21.15
4H	2H	18.60	19.81	19.00	20.16	20.54	16.99	18.21	17.39	18.55	18.93
	3H	19.71	20.71	20.12	21.11	21.52	18.77	19.77	19.18	20.17	20.57
	4H	20.10	21.00	20.54	21.42	21.86	19.48	20.38	19.91	20.79	21.23
	6H	20.34	21.12	20.80	21.57	22.03	20.05	20.83	20.51	21.27	21.74
	8H	20.39	21.11	20.85	21.56	22.03	20.24	20.97	20.71	21.41	21.88
	12H	20.40	21.04	20.88	21.52	22.00	20.38	21.03	20.86	21.51	21.98
8H	4H	20.26	20.99	20.73	21.43	21.90	19.69	20.42	20.15	20.86	21.33
	6H	20.57	21.17	21.07	21.66	22.14	20.36	20.96	20.86	21.46	21.93
	8H	20.65	21.19	21.17	21.70	22.19	20.62	21.16	21.14	21.67	22.16
	12H	20.68	21.16	21.20	21.65	22.22	20.83	21.30	21.34	21.80	22.36
12H	4H	20.26	20.91	20.75	21.39	21.86	19.69	20.33	20.17	20.81	21.29
	6H	20.59	21.12	21.10	21.64	22.13	20.37	20.91	20.89	21.42	21.91
	8H	20.70	21.18	21.21	21.67	22.24	20.68	21.15	21.19	21.64	22.21