

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: P1059114

Luminaire Tested: S123RDR-S1165D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059114  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-66)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S1165D850-X4F0-XX-UDD-BVL-W  
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: -

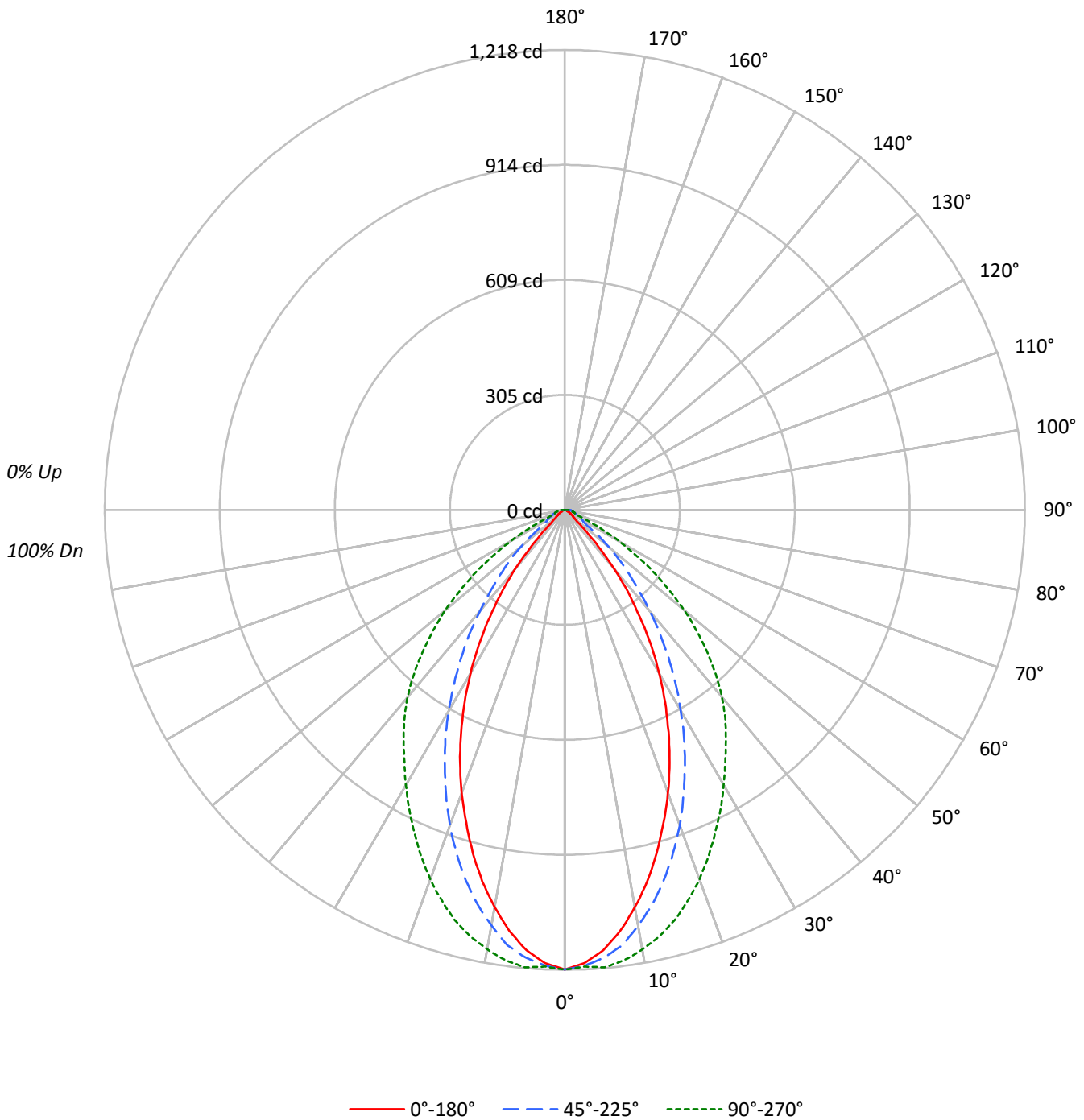
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1461.8 lumens  
Efficiency: N/A  
Efficacy: 35.0 lumens/watt  
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94  
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	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	112	108	105	102	109	106	103	101	102	100	98	98	96	95	95	93	92	90
2	105	99	94	90	102	97	92	88	94	90	87	91	87	85	88	85	83	81
3	98	90	84	79	96	89	83	79	86	81	77	83	79	76	81	78	75	73
4	92	83	76	71	90	81	75	70	79	74	70	77	72	69	75	71	68	66
5	86	76	69	64	84	75	69	64	73	67	63	71	66	62	70	65	62	60
6	81	70	63	58	79	69	63	58	68	62	57	66	61	57	65	60	57	55
7	76	65	58	53	75	65	58	53	63	57	53	62	56	52	61	56	52	50
8	72	61	54	49	70	60	53	49	59	53	49	58	52	48	57	52	48	47
9	68	57	50	45	67	56	50	45	55	49	45	54	49	45	53	48	45	43
10	64	53	46	42	63	53	46	42	52	46	42	51	45	42	50	45	42	40

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

	0°	45°	90°
0°	14296	14296	14296
5°	13804	14030	14332
10°	12743	13334	14097
15°	11436	12331	13673
20°	9976	11115	13015
25°	8415	9742	12209
30°	6769	8331	11410
35°	4954	6858	10664
40°	3090	5347	9931
45°	1169	3986	8848
50°	555	2748	7541
55°	426	1507	5831
60°	301	1278	3833
65°	222	1111	1600
70°	220	1044	1044
75°	290	1089	1089
80°	433	1298	1190
85°	862	2156	1725

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 8848 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	111.8	7.6
10°-20°	286.6	19.6
20°-30°	354.7	24.3
30°-40°	318.0	21.8
40°-50°	208.5	14.3
50°-60°	104.4	7.1
60°-70°	40.7	2.8
70°-80°	22.9	1.6
80°-90°	14.1	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°	753.1	51.5
0°-40°	1071.1	73.3
0°-60°	1384.0	94.7
0°-90°	1461.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1461.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1218	1218	1218	1218	1218	
5°	1171	1190	1190	1203	1216	108
15°	941	979	1014	1082	1125	262
25°	650	690	752	859	942	296
35°	346	392	478	622	744	215
45°	70	114	240	411	533	67
55°	21	26	74	202	285	19
65°	8	24	40	53	58	8
75°	6	24	24	24	24	7
85°	6	16	16	16	13	6
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1217.5	1217.5	1217.5	1217.5	1217.5
2.5°	1201.5	1219.1	1207.9	1209.5	1211.1
5°	1171.1	1190.3	1190.3	1203.1	1215.9
7.5°	1124.7	1147.1	1163.1	1185.5	1203.1
10°	1068.7	1095.9	1118.3	1158.3	1182.3
12.5°	1007.9	1041.5	1070.3	1123.1	1156.7
15°	940.7	979.1	1014.3	1081.5	1124.7
17.5°	868.7	907.1	953.5	1031.9	1084.7
20°	798.3	836.7	889.5	977.5	1041.5
22.5°	724.7	764.7	820.7	918.3	993.5
25°	649.5	689.5	751.9	859.1	942.3
27.5°	574.4	614.4	684.7	801.5	892.7
30°	499.2	539.2	614.4	739.1	841.5
32.5°	424.0	467.2	545.6	681.5	790.3
35°	345.6	392.0	478.4	622.3	743.9
37.5°	273.6	316.8	414.4	571.2	697.5
40°	201.6	248.0	348.8	521.6	647.9
42.5°	131.2	180.8	289.6	467.2	592.0
45°	70.4	113.6	240.0	411.2	532.8
47.5°	38.4	62.4	193.6	352.0	472.0
50°	30.4	35.2	150.4	300.8	412.8
52.5°	25.6	28.8	107.2	252.8	347.2
55°	20.8	25.6	73.6	201.6	284.8
57.5°	17.6	22.4	57.6	156.8	222.4
60°	12.8	19.2	54.4	115.2	163.2
62.5°	9.6	20.8	48.0	80.0	107.2
65°	8.0	24.0	40.0	52.8	57.6
67.5°	6.4	25.6	35.2	33.6	33.6
70°	6.4	24.0	30.4	28.8	30.4
72.5°	6.4	25.6	27.2	25.6	27.2
75°	6.4	24.0	24.0	24.0	24.0
77.5°	6.4	22.4	22.4	20.8	20.8
80°	6.4	19.2	19.2	19.2	17.6
82.5°	6.4	17.6	17.6	17.6	14.4
85°	6.4	16.0	16.0	16.0	12.8
87.5°	4.8	14.4	16.0	14.4	9.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)