

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: P1059103

Luminaire Tested: S123RDR-S1165D840-X4F0-XX-UDD-BVL-B

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1059103  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-30)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S123RDR-S1165D840-X4F0-XX-UDD-BVL-B  
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE  
LOUVER WITH DIFFUSER  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

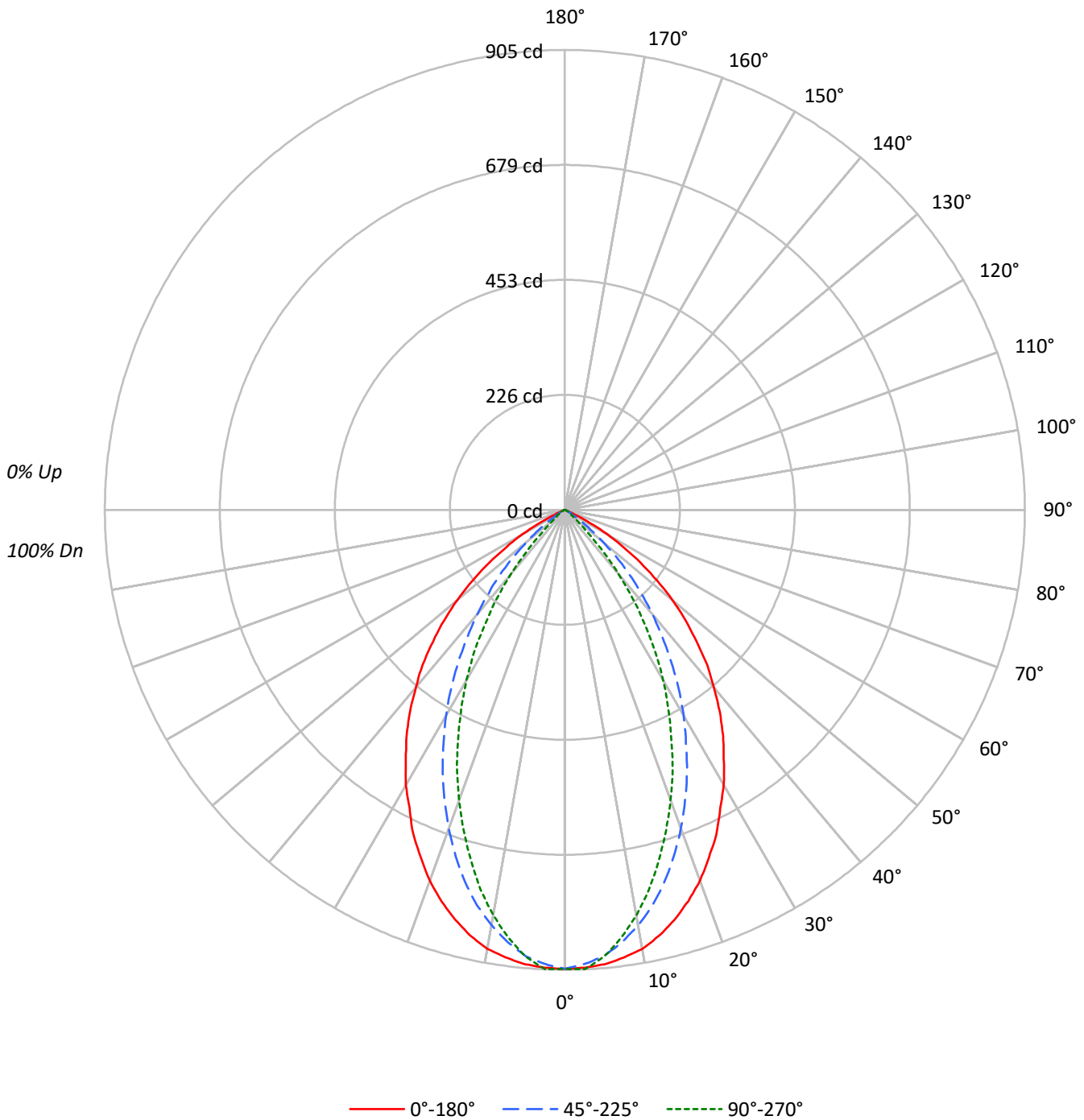
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1030.7 lumens  
Efficiency: N/A  
Efficacy: 24.7 lumens/watt  
Spacing Criteria (0/90/45): 1.06 / 0.81 / 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	113	110	107	104	110	107	105	103	103	101	100	100	98	97	96	95	94	92
2	106	101	96	92	104	99	95	91	96	92	89	93	90	87	90	87	85	84
3	100	92	87	82	98	91	86	82	88	84	80	86	82	79	83	80	78	76
4	94	85	79	74	92	84	78	74	82	77	73	80	75	72	78	74	71	69
5	88	79	72	67	86	78	71	67	76	70	66	74	69	65	72	68	65	63
6	83	73	66	61	81	72	66	61	70	65	60	69	64	60	67	63	60	58
7	78	68	61	56	77	67	60	56	66	60	56	64	59	55	63	58	55	53
8	74	63	56	52	72	62	56	51	61	55	51	60	55	51	59	54	51	49
9	70	59	52	48	68	58	52	48	57	52	47	56	51	47	55	51	47	46
10	66	55	49	44	65	55	48	44	54	48	44	53	48	44	52	47	44	42

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

	0°	45°	90°
0°	10606	10606	10606
5°	10578	10389	10407
10°	10458	9903	9660
15°	10150	9212	8682
20°	9706	8342	7598
25°	9139	7368	6426
30°	8480	6331	5246
35°	7777	5234	3899
40°	6979	4102	2497
45°	6086	2996	1038
50°	5049	1781	398
55°	3722	745	297
60°	2255	272	171
65°	606	161	81
70°	0	51	51
75°	0	0	68
80°	0	0	0
85°	0	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 6086 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	83.2	8.1
10°-20°	214.6	20.8
20°-30°	267.5	25.9
30°-40°	239.1	23.2
40°-50°	150.9	14.6
50°-60°	63.2	6.1
60°-70°	11.9	1.2
70°-80°	0.4	0.0
80°-90°	0.0	0.0
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°	565.2	54.8
0°-40°	804.3	78.0
0°-60°	1018.4	98.8
0°-90°	1030.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1030.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	903	903	903	903	903	
5°	897	896	881	884	883	85
15°	835	814	758	726	714	234
25°	705	649	569	519	496	323
35°	542	464	365	300	272	338
45°	366	285	180	96	62	283
55°	182	125	36	14	14	163
65°	22	16	6	3	3	31
75°	0	0	0	0	2	0
85°	0	0	0	0	0	0
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	903.2	903.2	903.2	903.2	903.2
2.5°	901.8	903.2	894.5	903.2	904.7
5°	897.4	896.0	881.4	884.3	882.9
7.5°	888.7	884.3	858.2	852.3	849.4
10°	877.1	865.4	830.5	816.0	810.2
12.5°	858.2	842.2	797.1	773.8	765.1
15°	834.9	814.5	757.8	725.8	714.2
17.5°	807.2	778.2	714.2	679.3	661.8
20°	776.7	736.0	667.6	625.4	608.0
22.5°	740.3	695.3	618.2	573.1	554.2
25°	705.4	648.7	568.7	519.3	496.0
27.5°	661.8	602.2	516.3	465.4	440.7
30°	625.4	557.1	466.9	410.2	386.9
32.5°	581.8	510.5	416.0	353.4	331.6
35°	542.5	464.0	365.1	299.6	272.0
37.5°	500.3	418.9	314.2	245.8	219.6
40°	455.3	373.8	267.6	192.0	162.9
42.5°	414.5	328.7	221.1	142.5	113.5
45°	366.5	285.1	180.4	96.0	62.5
47.5°	322.9	244.4	136.7	53.8	33.5
50°	276.4	202.2	97.5	27.6	21.8
52.5°	228.4	161.4	64.0	18.9	17.5
55°	181.8	125.1	36.4	14.5	14.5
57.5°	136.7	90.2	18.9	11.6	10.2
60°	96.0	59.6	11.6	8.7	7.3
62.5°	55.3	34.9	8.7	5.8	5.8
65°	21.8	16.0	5.8	2.9	2.9
67.5°	1.5	4.4	2.9	1.5	1.5
70°	0.0	0.0	1.5	1.5	1.5
72.5°	0.0	0.0	1.5	1.5	1.5
75°	0.0	0.0	0.0	0.0	1.5
77.5°	0.0	0.0	0.0	0.0	0.0
80°	0.0	0.0	0.0	0.0	0.0
82.5°	0.0	0.0	0.0	0.0	0.0
85°	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)