

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: P1059601

Luminaire Tested: S123RDR-H340D850-X4F0-XX-UDD-SVL-B

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059601
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-29)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H340D850-X4F0-XX-UDD-SVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH SILVER STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

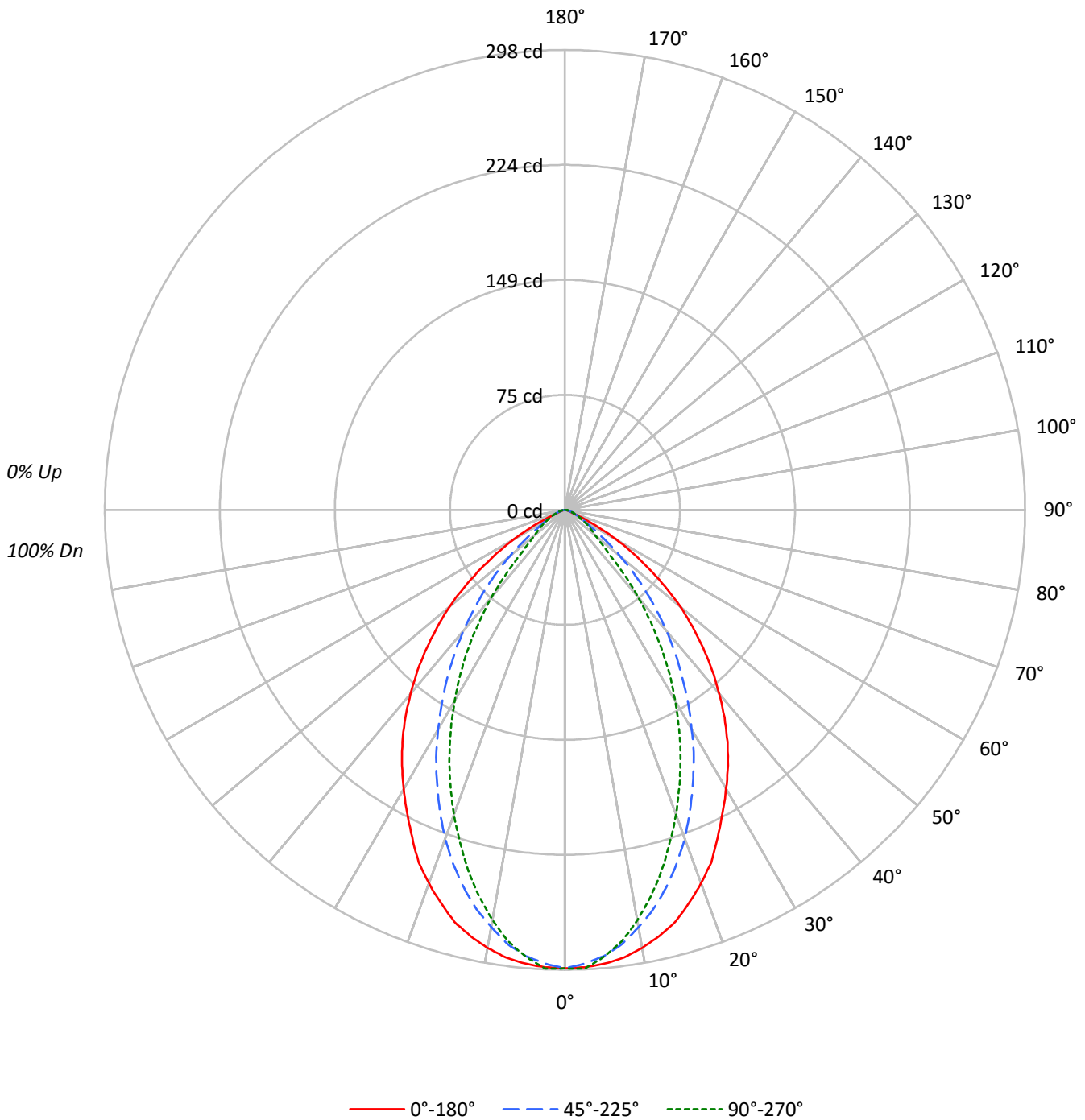
Lumens per Lamp: N/A
Luminaire Lumens: 383.5 lumens
Efficiency: N/A
Efficacy: 32.8 lumens/watt
Spacing Criteria (0/90/45): 1.08 / 0.85 / 0.98
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 11.7
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				
1	112	109	106	103	110	107	104	102	103	100	98	99	97	95	95	94	93	91				
2	105	99	94	90	103	97	93	89	94	90	87	91	88	85	88	86	83	82				
3	98	90	84	80	96	89	83	79	86	82	78	84	80	76	81	78	75	73				
4	92	83	76	71	90	82	75	71	79	74	70	77	73	69	75	71	68	66				
5	86	76	69	64	84	75	68	63	73	67	63	71	66	62	70	65	62	60				
6	81	70	63	58	79	69	62	58	68	62	57	66	61	57	65	60	56	55				
7	76	65	58	53	74	64	57	53	63	57	52	61	56	52	60	55	52	50				
8	71	60	53	48	70	60	53	48	58	52	48	57	52	48	56	51	48	46				
9	67	56	49	45	66	56	49	44	55	49	44	54	48	44	53	48	44	42				
10	64	52	46	41	63	52	46	41	51	45	41	50	45	41	49	44	41	39				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3489	3489	3489
5°	3480	3421	3425
10°	3438	3274	3219
15°	3360	3080	2941
20°	3218	2833	2627
25°	3033	2538	2295
30°	2831	2226	1934
35°	2630	1898	1555
40°	2382	1565	1128
45°	2101	1214	679
50°	1781	848	462
55°	1355	508	387
60°	885	324	303
65°	370	242	242
70°	127	175	189
75°	104	127	145
80°	61	95	122
85°	67	67	121

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 2101 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	27.4	7.2
10°-20°	71.8	18.7
20°-30°	92.1	24.0
30°-40°	86.4	22.5
40°-50°	60.3	15.7
50°-60°	31.2	8.1
60°-70°	10.6	2.8
70°-80°	3.0	0.8
80°-90°	0.7	0.2
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°	191.3	49.9
0°-40°	277.7	72.4
0°-60°	369.2	96.3
0°-90°	383.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	383.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	297	297	297	297	297	
5°	295	295	290	292	291	28
15°	276	270	253	245	242	77
25°	234	219	196	183	177	108
35°	184	161	132	115	108	114
45°	126	104	73	51	41	97
55°	66	50	25	19	19	60
65°	13	12	9	8	9	16
75°	2	2	3	3	3	2
85°	0	0	0	0	1	0
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	297.1	297.1	297.1	297.1	297.1
2.5°	296.6	297.1	294.3	297.1	297.5
5°	295.2	294.8	290.2	291.6	290.6
7.5°	292.5	291.1	283.8	281.9	281.9
10°	288.3	285.6	274.6	271.3	270.0
12.5°	282.8	279.2	264.9	258.9	256.6
15°	276.4	269.5	253.4	245.1	241.9
17.5°	267.2	258.0	240.5	230.9	225.8
20°	257.5	246.0	226.7	215.2	210.2
22.5°	247.4	233.6	211.5	199.1	193.6
25°	234.1	219.4	195.9	182.6	177.1
27.5°	221.2	205.6	180.7	165.6	160.0
30°	208.8	190.4	164.2	149.5	142.6
32.5°	196.4	175.7	148.5	132.4	126.0
35°	183.5	161.0	132.4	115.4	108.5
37.5°	169.7	146.7	117.3	98.9	90.6
40°	155.4	131.5	102.1	81.4	73.6
42.5°	141.2	117.7	86.9	65.8	56.6
45°	126.5	103.5	73.1	50.6	40.9
47.5°	111.8	89.2	59.8	36.8	30.8
50°	97.5	75.9	46.4	27.1	25.3
52.5°	81.9	63.0	35.0	22.5	22.1
55°	66.2	49.7	24.8	19.3	18.9
57.5°	52.4	38.6	17.9	16.1	15.6
60°	37.7	27.6	13.8	13.3	12.9
62.5°	24.8	18.9	11.0	10.6	10.6
65°	13.3	11.5	8.7	8.3	8.7
67.5°	5.5	6.4	6.4	6.9	6.9
70°	3.7	4.1	5.1	5.5	5.5
72.5°	2.8	3.2	3.7	4.1	4.1
75°	2.3	2.3	2.8	3.2	3.2
77.5°	1.4	1.8	1.8	2.3	2.8
80°	0.9	1.4	1.4	1.8	1.8
82.5°	0.5	0.9	0.9	1.4	1.4
85°	0.5	0.5	0.5	0.5	0.9
87.5°	0.0	0.0	0.0	0.0	0.5
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	10.67	11.93	11.03	12.24	12.56	4.18	5.44	4.54	5.75	6.06
	3H	10.62	11.73	11.00	12.06	12.43	4.95	6.06	5.33	6.39	6.76
	4H	10.57	11.60	10.97	11.95	12.33	5.15	6.18	5.55	6.53	6.92
	6H	10.50	11.44	10.91	11.81	12.21	5.29	6.24	5.71	6.61	7.00
	8H	10.46	11.35	10.89	11.74	12.15	5.33	6.22	5.76	6.61	7.02
	12H	10.41	11.26	10.85	11.65	12.08	5.35	6.20	5.78	6.58	7.01
4H	2H	10.51	11.54	10.92	11.90	12.28	4.43	5.46	4.83	5.81	6.20
	3H	10.50	11.33	10.91	11.74	12.14	5.34	6.17	5.75	6.58	6.98
	4H	10.45	11.19	10.88	11.61	12.06	5.61	6.35	6.04	6.77	7.21
	6H	10.39	11.03	10.86	11.48	11.94	5.82	6.46	6.29	6.91	7.38
	8H	10.34	10.93	10.81	11.38	11.85	5.88	6.48	6.36	6.93	7.40
	12H	10.29	10.82	10.78	11.30	11.78	5.92	6.45	6.41	6.93	7.41
8H	4H	10.33	10.93	10.81	11.38	11.85	5.59	6.19	6.06	6.63	7.11
	6H	10.27	10.76	10.78	11.25	11.74	5.86	6.34	6.36	6.84	7.32
	8H	10.22	10.66	10.75	11.17	11.67	5.97	6.40	6.49	6.92	7.41
	12H	10.19	10.57	10.70	11.07	11.64	6.04	6.43	6.56	6.92	7.50
12H	4H	10.29	10.81	10.78	11.30	11.77	5.55	6.08	6.04	6.56	7.04
	6H	10.21	10.65	10.74	11.17	11.66	5.82	6.25	6.34	6.77	7.26
	8H	10.18	10.57	10.70	11.07	11.64	5.96	6.34	6.48	6.84	7.41