

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: P1059663

Luminaire Tested: S123RDR-H560D835-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059663
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-H560D835-X4F0-XX-UDD-BVL-W
Description: DEFINE 3 WHITE REGRESSED DIRECT RECESSED HOUSING WITH BLACK STRAIGHT BLADE
LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

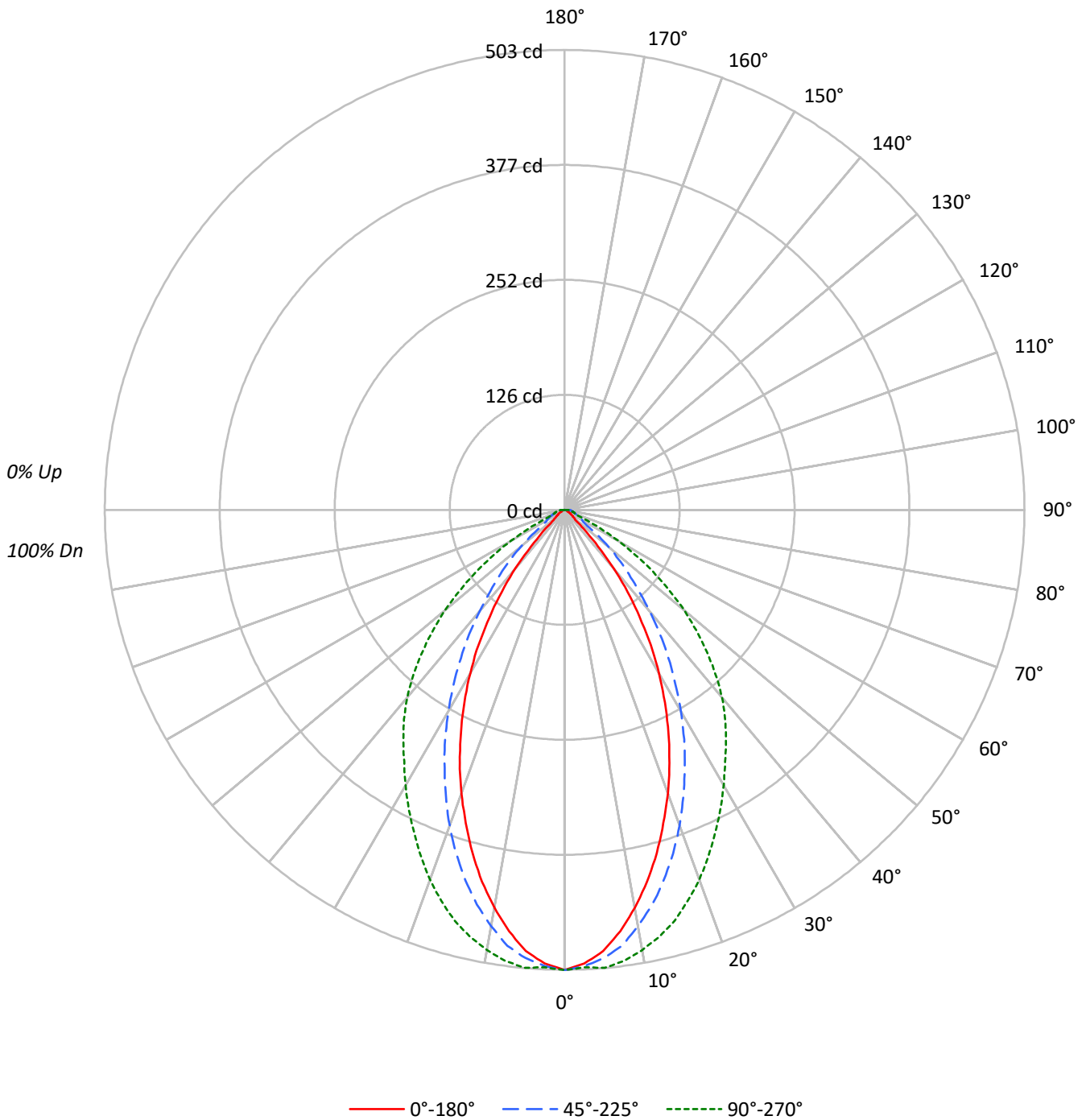
Lumens per Lamp: N/A
Luminaire Lumens: 604.3 lumens
Efficiency: N/A
Efficacy: 34.7 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 17.4
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	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°	5910	5910	5910
5°	5707	5801	5925
10°	5268	5512	5828
15°	4728	5097	5653
20°	4124	4595	5381
25°	3479	4028	5048
30°	2799	3444	4717
35°	2048	2835	4409
40°	1277	2210	4107
45°	483	1647	3657
50°	230	1136	3117
55°	176	622	2410
60°	124	528	1585
65°	92	458	661
70°	89	433	433
75°	118	449	449
80°	176	534	494
85°	350	889	714

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 3657 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.2	7.6
10°-20°	118.5	19.6
20°-30°	146.7	24.3
30°-40°	131.5	21.8
40°-50°	86.2	14.3
50°-60°	43.1	7.1
60°-70°	16.8	2.8
70°-80°	9.5	1.6
80°-90°	5.8	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°	311.3	51.5
0°-40°	442.8	73.3
0°-60°	572.2	94.7
0°-90°	604.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	604.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	503	503	503	503	503	
5°	484	492	492	497	503	45
15°	389	405	419	447	465	108
25°	268	285	311	355	390	123
35°	143	162	198	257	308	89
45°	29	47	99	170	220	28
55°	9	11	30	83	118	8
65°	3	10	16	22	24	3
75°	3	10	10	10	10	3
85°	3	7	7	7	5	2
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	503.3	503.3	503.3	503.3	503.3
2.5°	496.7	504.0	499.4	500.0	500.7
5°	484.2	492.1	492.1	497.4	502.7
7.5°	465.0	474.2	480.8	490.1	497.4
10°	441.8	453.1	462.3	478.9	488.8
12.5°	416.7	430.6	442.5	464.3	478.2
15°	388.9	404.8	419.3	447.1	465.0
17.5°	359.1	375.0	394.2	426.6	448.4
20°	330.0	345.9	367.7	404.1	430.6
22.5°	299.6	316.2	339.3	379.6	410.7
25°	268.5	285.1	310.9	355.2	389.6
27.5°	237.4	254.0	283.1	331.4	369.1
30°	206.4	222.9	254.0	305.6	347.9
32.5°	175.3	193.1	225.5	281.8	326.7
35°	142.9	162.0	197.8	257.3	307.6
37.5°	113.1	131.0	171.3	236.1	288.4
40°	83.3	102.5	144.2	215.6	267.9
42.5°	54.2	74.7	119.7	193.1	244.7
45°	29.1	47.0	99.2	170.0	220.2
47.5°	15.9	25.8	80.0	145.5	195.1
50°	12.6	14.6	62.2	124.3	170.6
52.5°	10.6	11.9	44.3	104.5	143.5
55°	8.6	10.6	30.4	83.3	117.7
57.5°	7.3	9.3	23.8	64.8	91.9
60°	5.3	7.9	22.5	47.6	67.5
62.5°	4.0	8.6	19.8	33.1	44.3
65°	3.3	9.9	16.5	21.8	23.8
67.5°	2.6	10.6	14.6	13.9	13.9
70°	2.6	9.9	12.6	11.9	12.6
72.5°	2.6	10.6	11.2	10.6	11.2
75°	2.6	9.9	9.9	9.9	9.9
77.5°	2.6	9.3	9.3	8.6	8.6
80°	2.6	7.9	7.9	7.9	7.3
82.5°	2.6	7.3	7.3	7.3	6.0
85°	2.6	6.6	6.6	6.6	5.3
87.5°	2.0	6.0	6.6	6.0	4.0
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	0.00	0.00	0.00	0.12	0.44	12.78	14.03	13.14	14.34	14.66
	3H	0.86	1.97	1.24	2.30	2.67	12.86	13.97	13.24	14.30	14.66
	4H	1.95	2.99	2.36	3.34	3.72	12.93	13.97	13.34	14.32	14.70
	6H	2.93	3.88	3.35	4.25	4.65	13.04	13.99	13.45	14.36	14.75
	8H	3.41	4.31	3.84	4.70	5.10	13.10	13.99	13.53	14.39	14.79
	12H	3.96	4.82	4.39	5.20	5.63	13.18	14.04	13.61	14.42	14.85
4H	2H	1.78	2.81	2.18	3.16	3.55	12.63	13.66	13.03	14.01	14.40
	3H	4.09	4.94	4.51	5.34	5.75	12.81	13.65	13.22	14.06	14.46
	4H	5.46	6.21	5.89	6.63	7.08	12.96	13.71	13.39	14.13	14.58
	6H	6.54	7.19	7.01	7.64	8.11	13.18	13.83	13.65	14.28	14.75
	8H	6.99	7.60	7.47	8.05	8.52	13.31	13.92	13.78	14.37	14.84
	12H	7.48	8.02	7.97	8.50	8.98	13.48	14.02	13.97	14.51	14.98
8H	4H	6.44	7.05	6.91	7.49	7.97	12.95	13.56	13.42	14.01	14.48
	6H	7.95	8.45	8.46	8.95	9.43	13.29	13.79	13.79	14.29	14.77
	8H	8.73	9.18	9.25	9.69	10.19	13.52	13.97	14.05	14.49	14.98
	12H	9.53	9.92	10.04	10.42	10.99	13.86	14.26	14.38	14.75	15.33
12H	4H	6.61	7.15	7.10	7.63	8.11	12.94	13.48	13.43	13.96	14.43
	6H	8.27	8.72	8.79	9.23	9.73	13.31	13.76	13.83	14.28	14.77
	8H	9.23	9.62	9.74	10.12	10.69	13.62	14.02	14.14	14.52	15.09