

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: P1059762

Luminaire Tested: S123RDR-H775D850-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059762
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-H775D850-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: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

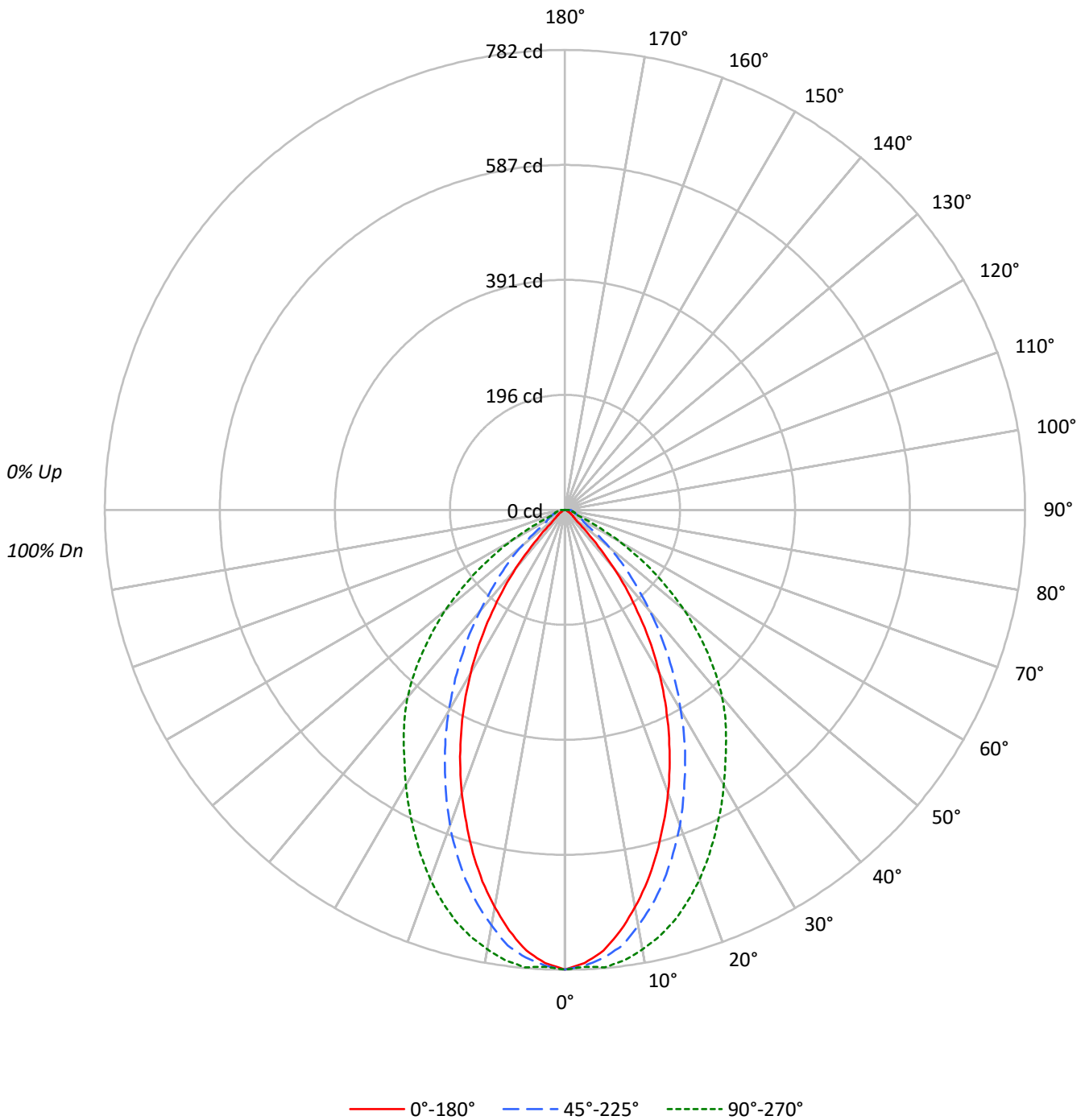
Lumens per Lamp: N/A
Luminaire Lumens: 938.6 lumens
Efficiency: N/A
Efficacy: 39.9 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.5
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°	9179	9179	9179
5°	8864	9009	9202
10°	8182	8562	9051
15°	7343	7918	8780
20°	6405	7138	8356
25°	5404	6255	7840
30°	4346	5349	7326
35°	3181	4404	6848
40°	1984	3432	6377
45°	751	2559	5681
50°	356	1765	4841
55°	274	968	3744
60°	193	820	2461
65°	142	714	1028
70°	141	669	669
75°	186	699	699
80°	277	832	764
85°	552	1388	1105

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5681 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.8	7.6
10°-20°	184.0	19.6
20°-30°	227.8	24.3
30°-40°	204.2	21.8
40°-50°	133.9	14.3
50°-60°	67.0	7.1
60°-70°	26.1	2.8
70°-80°	14.7	1.6
80°-90°	9.1	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°	483.6	51.5
0°-40°	687.8	73.3
0°-60°	888.6	94.7
0°-90°	938.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	938.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	782	782	782	782	782	
5°	752	764	764	772	781	70
15°	604	629	651	694	722	168
25°	417	443	483	552	605	190
35°	222	252	307	400	478	138
45°	45	73	154	264	342	43
55°	13	16	47	129	183	12
65°	5	15	26	34	37	5
75°	4	15	15	15	15	4
85°	4	10	10	10	8	4
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	781.7	781.7	781.7	781.7	781.7
2.5°	771.5	782.8	775.6	776.6	777.6
5°	752.0	764.3	764.3	772.5	780.7
7.5°	722.2	736.5	746.8	761.2	772.5
10°	686.2	703.7	718.1	743.7	759.1
12.5°	647.2	668.7	687.2	721.1	742.7
15°	604.0	628.7	651.3	694.4	722.2
17.5°	557.8	582.5	612.2	662.6	696.5
20°	512.6	537.3	571.2	627.7	668.7
22.5°	465.3	491.0	527.0	589.6	637.9
25°	417.1	442.7	482.8	551.6	605.1
27.5°	368.8	394.5	439.7	514.7	573.2
30°	320.5	346.2	394.5	474.6	540.3
32.5°	272.2	300.0	350.3	437.6	507.5
35°	221.9	251.7	307.2	399.6	477.7
37.5°	175.7	203.4	266.1	366.7	447.9
40°	129.4	159.2	223.9	334.9	416.0
42.5°	84.2	116.1	185.9	300.0	380.1
45°	45.2	72.9	154.1	264.0	342.1
47.5°	24.7	40.1	124.3	226.0	303.0
50°	19.5	22.6	96.6	193.1	265.0
52.5°	16.4	18.5	68.8	162.3	222.9
55°	13.4	16.4	47.3	129.4	182.9
57.5°	11.3	14.4	37.0	100.7	142.8
60°	8.2	12.3	34.9	74.0	104.8
62.5°	6.2	13.4	30.8	51.4	68.8
65°	5.1	15.4	25.7	33.9	37.0
67.5°	4.1	16.4	22.6	21.6	21.6
70°	4.1	15.4	19.5	18.5	19.5
72.5°	4.1	16.4	17.5	16.4	17.5
75°	4.1	15.4	15.4	15.4	15.4
77.5°	4.1	14.4	14.4	13.4	13.4
80°	4.1	12.3	12.3	12.3	11.3
82.5°	4.1	11.3	11.3	11.3	9.2
85°	4.1	10.3	10.3	10.3	8.2
87.5°	3.1	9.2	10.3	9.2	6.2
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	0.07	1.32	0.43	1.63	1.95	14.31	15.56	14.67	15.88	16.19
	3H	2.39	3.50	2.77	3.83	4.20	14.39	15.50	14.77	15.83	16.20
	4H	3.49	4.52	3.89	4.87	5.26	14.47	15.50	14.87	15.85	16.24
	6H	4.48	5.43	4.90	5.80	6.19	14.57	15.52	14.99	15.89	16.29
	8H	4.96	5.86	5.39	6.25	6.66	14.63	15.53	15.06	15.92	16.32
	12H	5.52	6.38	5.95	6.76	7.19	14.71	15.57	15.14	15.95	16.38
4H	2H	3.31	4.35	3.72	4.70	5.08	14.16	15.20	14.57	15.55	15.93
	3H	5.63	6.47	6.04	6.88	7.28	14.34	15.18	14.75	15.59	15.99
	4H	7.00	7.75	7.43	8.17	8.62	14.49	15.25	14.93	15.67	16.11
	6H	8.08	8.73	8.55	9.18	9.65	14.72	15.37	15.18	15.82	16.28
	8H	8.54	9.15	9.01	9.59	10.07	14.84	15.45	15.31	15.90	16.37
	12H	9.03	9.57	9.52	10.05	10.53	15.01	15.55	15.50	16.04	16.51
8H	4H	7.97	8.58	8.44	9.03	9.50	14.49	15.10	14.96	15.54	16.02
	6H	9.49	9.99	9.99	10.49	10.97	14.83	15.32	15.33	15.82	16.30
	8H	10.26	10.71	10.79	11.23	11.72	15.06	15.51	15.58	16.02	16.52
	12H	11.07	11.47	11.59	11.96	12.54	15.39	15.79	15.91	16.28	16.86
12H	4H	8.15	8.68	8.63	9.17	9.64	14.47	15.01	14.96	15.49	15.97
	6H	9.80	10.25	10.33	10.77	11.26	14.84	15.29	15.37	15.81	16.30
	8H	10.76	11.16	11.28	11.65	12.23	15.15	15.55	15.67	16.05	16.62