

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: P1059760

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059760
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-H775D850-X4F0-XX-UDD-BVL-B
Description: DEFINE 3 BLACK 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

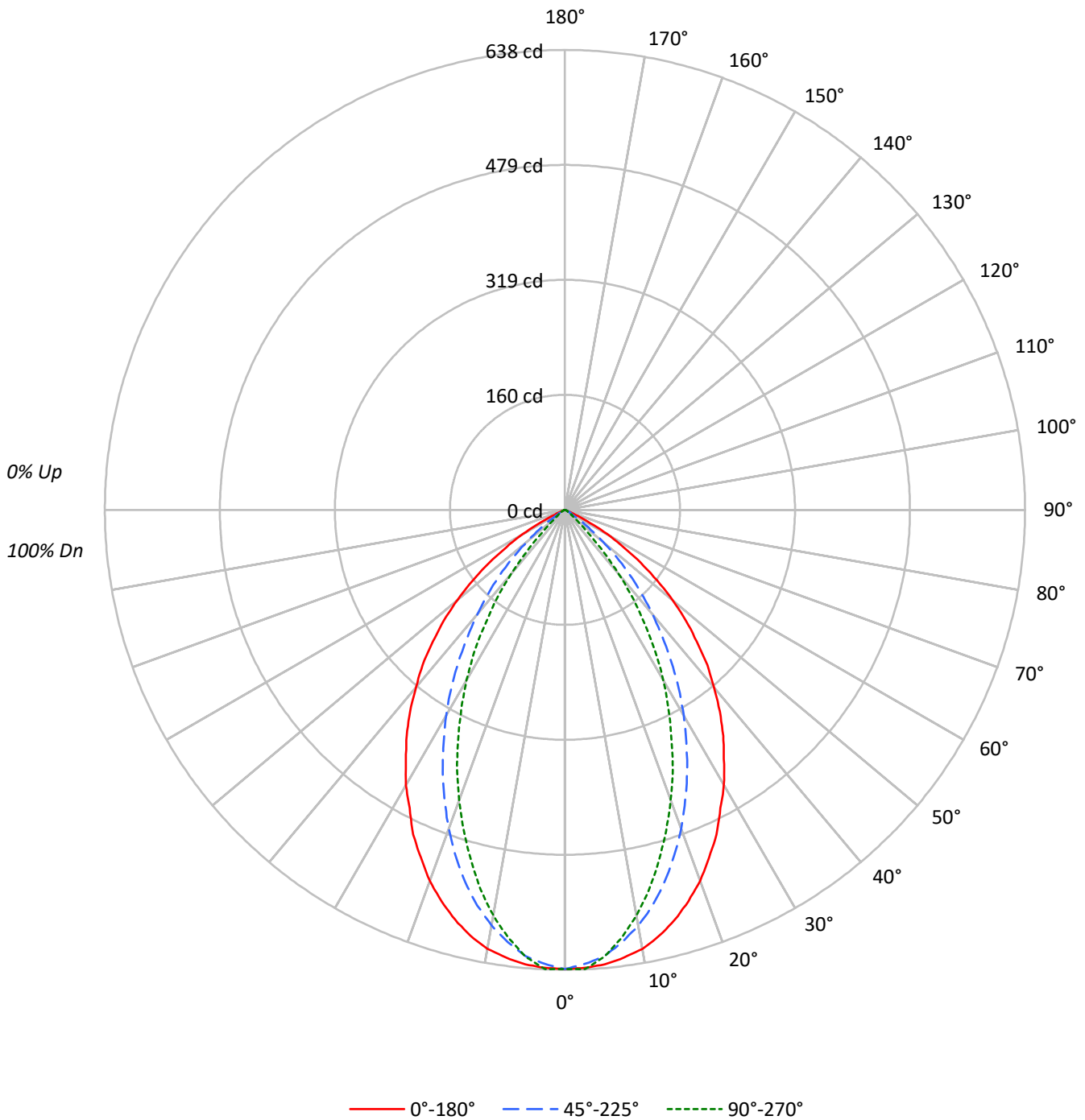
Lumens per Lamp: N/A
Luminaire Lumens: 726.8 lumens
Efficiency: N/A
Efficacy: 30.9 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 0.81 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	7479	7479	7479
5°	7459	7326	7338
10°	7374	6982	6812
15°	7157	6495	6122
20°	6844	5883	5357
25°	6444	5195	4531
30°	5980	4464	3699
35°	5483	3690	2749
40°	4921	2893	1761
45°	4293	2112	732
50°	3560	1255	281
55°	2625	524	211
60°	1590	193	120
65°	428	114	58
70°	0	34	34
75°	0	0	45
80°	0	0	0
85°	0	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 4293 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	58.6	8.1
10°-20°	151.3	20.8
20°-30°	188.6	25.9
30°-40°	168.6	23.2
40°-50°	106.4	14.6
50°-60°	44.5	6.1
60°-70°	8.4	1.2
70°-80°	0.3	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°	398.5	54.8
0°-40°	567.2	78.0
0°-60°	718.1	98.8
0°-90°	726.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	726.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	637	637	637	637	637	
5°	633	632	622	624	622	60
15°	589	574	534	512	504	165
25°	497	457	401	366	350	228
35°	382	327	257	211	192	238
45°	258	201	127	68	44	199
55°	128	88	26	10	10	115
65°	15	11	4	2	2	22
75°	0	0	0	0	1	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°	636.9	636.9	636.9	636.9	636.9
2.5°	635.9	636.9	630.7	636.9	637.9
5°	632.8	631.8	621.5	623.6	622.5
7.5°	626.6	623.6	605.1	601.0	599.0
10°	618.4	610.2	585.6	575.4	571.3
12.5°	605.1	593.8	562.0	545.6	539.5
15°	588.7	574.3	534.3	511.8	503.6
17.5°	569.2	548.7	503.6	479.0	466.6
20°	547.7	519.0	470.8	441.0	428.7
22.5°	522.0	490.2	435.9	404.1	390.8
25°	497.4	457.4	401.0	366.1	349.7
27.5°	466.6	424.6	364.1	328.2	310.8
30°	441.0	392.8	329.2	289.2	272.8
32.5°	410.2	360.0	293.3	249.2	233.8
35°	382.5	327.2	257.4	211.3	191.8
37.5°	352.8	295.4	221.5	173.3	154.9
40°	321.0	263.6	188.7	135.4	114.9
42.5°	292.3	231.8	155.9	100.5	80.0
45°	258.5	201.0	127.2	67.7	44.1
47.5°	227.7	172.3	96.4	37.9	23.6
50°	194.9	142.6	68.7	19.5	15.4
52.5°	161.0	113.8	45.1	13.3	12.3
55°	128.2	88.2	25.6	10.3	10.3
57.5°	96.4	63.6	13.3	8.2	7.2
60°	67.7	42.0	8.2	6.2	5.1
62.5°	39.0	24.6	6.2	4.1	4.1
65°	15.4	11.3	4.1	2.1	2.1
67.5°	1.0	3.1	2.1	1.0	1.0
70°	0.0	0.0	1.0	1.0	1.0
72.5°	0.0	0.0	1.0	1.0	1.0
75°	0.0	0.0	0.0	0.0	1.0
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



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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	12.18	13.36	12.55	13.67	13.99	0.00	0.00	0.00	0.00	0.00
	3H	12.02	13.05	12.40	13.39	13.75	0.00	0.00	0.00	0.00	0.00
	4H	11.94	12.89	12.34	13.24	13.63	0.00	0.00	0.00	0.00	0.00
	6H	11.84	12.72	12.26	13.09	13.48	0.00	0.00	0.00	0.00	0.00
	8H	11.79	12.62	12.23	13.01	13.42	0.00	0.00	0.00	0.00	0.00
	12H	11.74	12.53	12.18	12.91	13.34	0.00	0.00	0.00	0.00	0.00
4H	2H	11.94	12.90	12.35	13.25	13.63	0.00	0.00	0.00	0.00	0.00
	3H	11.78	12.54	12.19	12.95	13.36	0.00	0.00	0.00	0.00	0.00
	4H	11.67	12.35	12.11	12.77	13.22	0.00	0.00	0.00	0.00	0.00
	6H	11.58	12.16	12.04	12.61	13.08	0.00	0.00	0.00	0.00	0.00
	8H	11.51	12.05	11.98	12.50	12.98	0.00	0.00	0.00	0.00	0.00
	12H	11.45	11.93	11.94	12.42	12.89	0.00	0.00	0.00	0.00	0.00
8H	4H	11.51	12.05	11.98	12.50	12.98	0.00	0.00	0.00	0.00	0.00
	6H	11.39	11.83	11.90	12.33	12.82	0.00	0.00	0.00	0.00	0.00
	8H	11.32	11.72	11.85	12.24	12.73	0.00	0.00	0.00	0.00	0.00
	12H	11.27	11.62	11.79	12.11	12.69	0.00	0.00	0.00	0.00	0.00
12H	4H	11.45	11.93	11.94	12.42	12.89	0.00	0.00	0.00	0.00	0.00
	6H	11.32	11.72	11.85	12.24	12.73	0.00	0.00	0.00	0.00	0.00
	8H	11.27	11.62	11.79	12.11	12.69	0.00	0.00	0.00	0.00	0.00