

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: P1059766

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

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059766
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2406-143-28)
Test Lab: INNOVATION CENTER
Issue Date: 8/7/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123RDR-H775D850-X4F0-XX-UDD-WVL-B
Description: DEFINE 3 BLACK REGRESSED DIRECT RECESSED HOUSING WITH WHITE STRAIGHT BLADE LOUVER WITH DIFFUSER
HIGH PERFORMANCE LIGHT ENGINE
Light Source: 5000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

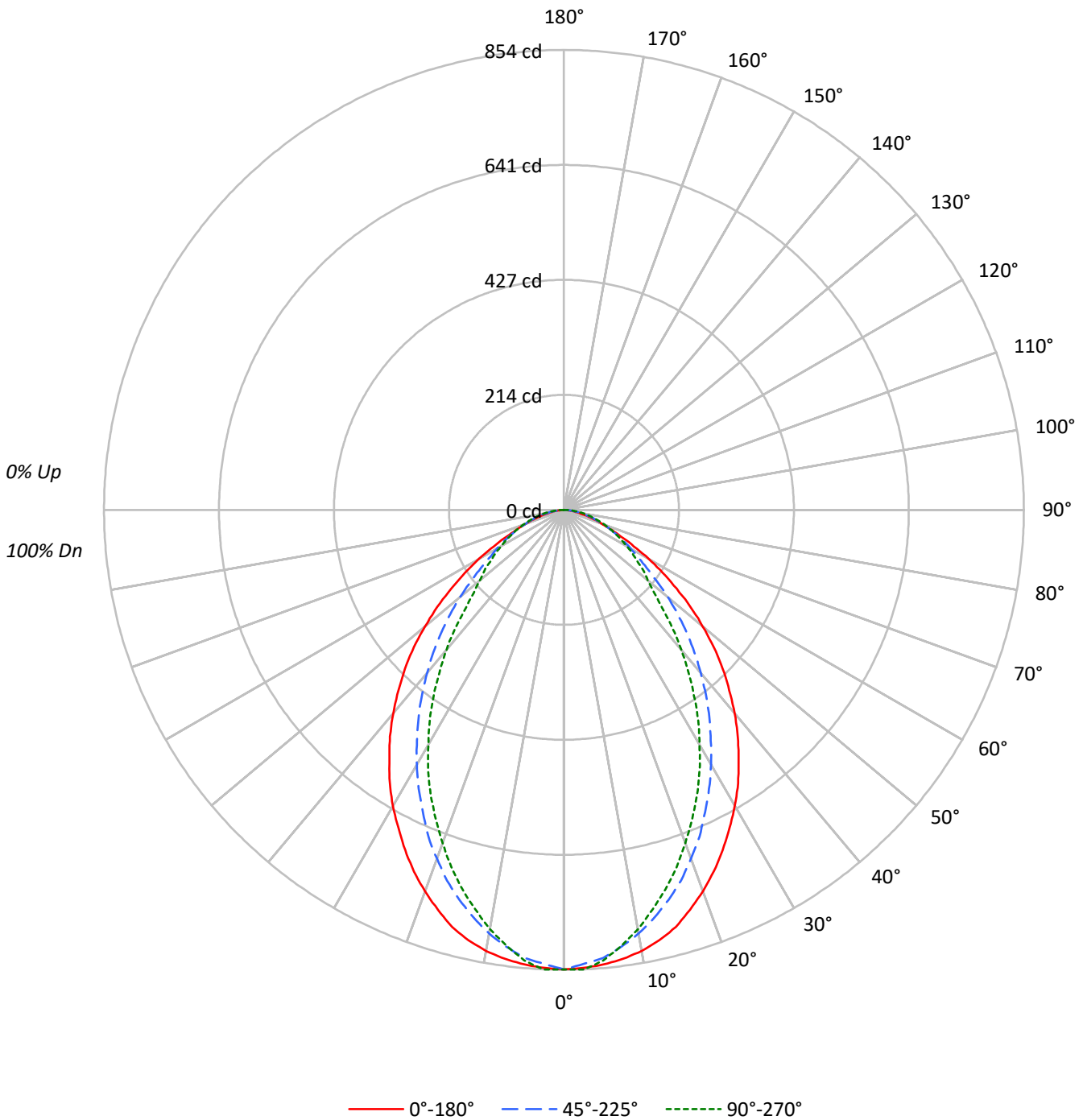
Lumens per Lamp: N/A
Luminaire Lumens: 1492.5 lumens
Efficiency: N/A
Efficacy: 63.5 lumens/watt
Spacing Criteria (0/90/45): 1.12 / 0.95 / 1.09
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	111	107	103	100	108	104	101	98	100	98	95	96	94	92	93	91	89	88
2	102	95	89	84	100	93	88	83	90	85	81	87	83	80	84	81	78	76
3	94	85	78	73	92	84	77	72	81	75	71	78	73	69	76	72	68	66
4	87	77	69	63	85	76	68	63	73	67	62	71	66	61	69	64	60	58
5	81	70	62	56	79	69	61	56	67	60	55	65	59	54	63	58	54	52
6	76	64	56	50	74	63	55	50	61	54	49	59	53	49	58	53	48	47
7	71	58	50	45	69	58	50	45	56	49	44	55	49	44	53	48	44	42
8	66	54	46	41	65	53	46	41	52	45	40	51	45	40	50	44	40	38
9	62	50	42	37	61	49	42	37	48	41	37	47	41	37	46	41	37	35
10	58	46	39	34	57	46	39	34	45	38	34	44	38	34	43	38	34	32

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10021	10021	10021
5°	9986	9841	9901
10°	9918	9527	9429
15°	9751	9115	8865
20°	9421	8612	8229
25°	9037	8026	7574
30°	8609	7413	6828
35°	8101	6749	6042
40°	7562	6053	5204
45°	6931	5349	4274
50°	6145	4591	3710
55°	5229	3843	3402
60°	4263	3349	3156
65°	3248	2965	2934
70°	2534	2640	2747
75°	2046	2373	2559
80°	1528	1941	2360
85°	835	1240	2075

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 6931 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	79.2	5.3
10°-20°	213.1	14.3
20°-30°	289.7	19.4
30°-40°	300.3	20.1
40°-50°	253.3	17.0
50°-60°	179.8	12.0
60°-70°	109.9	7.4
70°-80°	54.7	3.7
80°-90°	12.4	0.8
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°	582.1	39.0
0°-40°	882.4	59.1
0°-60°	1315.5	88.1
0°-90°	1492.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1492.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	853	853	853	853	853	
5°	847	847	835	840	840	80
15°	802	787	750	736	729	225
25°	698	667	620	597	585	321
35°	565	522	471	438	422	353
45°	417	373	322	278	257	321
55°	255	229	188	171	166	229
65°	117	113	107	107	106	119
75°	45	48	52	54	56	49
85°	6	7	9	13	15	9
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	853.4	853.4	853.4	853.4	853.4
2.5°	851.3	852.3	844.1	853.4	854.4
5°	847.2	847.2	834.9	840.0	840.0
7.5°	841.0	839.0	818.5	818.5	816.4
10°	831.8	825.7	799.0	793.9	790.8
12.5°	818.5	808.2	775.4	766.2	760.0
15°	802.1	786.7	749.8	736.4	729.2
17.5°	778.5	763.1	722.1	703.6	695.4
20°	753.9	731.3	689.2	670.8	658.5
22.5°	727.2	698.5	657.4	634.9	621.6
25°	697.5	666.7	619.5	596.9	584.6
27.5°	665.7	631.8	583.6	558.0	545.7
30°	634.9	595.9	546.7	518.0	503.6
32.5°	602.1	558.0	507.7	478.0	463.6
35°	565.1	522.1	470.8	438.0	421.5
37.5°	530.3	486.2	432.8	398.0	379.5
40°	493.3	449.2	394.9	359.0	339.5
42.5°	454.4	412.3	359.0	316.9	298.5
45°	417.4	373.3	322.1	278.0	257.4
47.5°	377.4	336.4	286.2	241.0	226.7
50°	336.4	298.5	251.3	210.3	203.1
52.5°	296.4	264.6	216.4	189.7	186.7
55°	255.4	228.7	187.7	171.3	166.2
57.5°	217.4	198.0	161.0	152.8	150.8
60°	181.5	165.1	142.6	137.4	134.4
62.5°	146.7	137.4	124.1	122.1	120.0
65°	116.9	112.8	106.7	106.7	105.6
67.5°	92.3	92.3	91.3	93.3	92.3
70°	73.8	74.9	76.9	79.0	80.0
72.5°	58.5	61.5	63.6	66.7	67.7
75°	45.1	48.2	52.3	54.4	56.4
77.5°	32.8	35.9	40.0	43.1	45.1
80°	22.6	24.6	28.7	32.8	34.9
82.5°	14.4	15.4	18.5	22.6	24.6
85°	6.2	7.2	9.2	13.3	15.4
87.5°	0.0	0.0	1.0	4.1	7.2
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	16.82	18.27	17.18	18.58	18.90	14.91	16.36	15.28	16.68	16.99
	3H	17.71	19.01	18.09	19.34	19.70	16.49	17.78	16.86	18.11	18.47
	4H	18.00	19.21	18.40	19.56	19.94	17.08	18.29	17.48	18.64	19.02
	6H	18.15	19.26	18.56	19.63	20.02	17.53	18.65	17.94	19.02	19.41
	8H	18.17	19.23	18.60	19.62	20.02	17.68	18.74	18.11	19.13	19.54
	12H	18.16	19.18	18.59	19.56	19.99	17.78	18.80	18.21	19.18	19.61
4H	2H	17.06	18.27	17.46	18.62	19.00	15.45	16.67	15.85	17.02	17.40
	3H	18.17	19.17	18.59	19.58	19.98	17.23	18.23	17.64	18.63	19.03
	4H	18.56	19.46	19.00	19.88	20.32	17.94	18.84	18.37	19.26	19.70
	6H	18.81	19.58	19.26	20.03	20.49	18.51	19.29	18.97	19.73	20.20
	8H	18.85	19.58	19.31	20.02	20.49	18.70	19.43	19.17	19.88	20.34
	12H	18.86	19.50	19.34	19.98	20.46	18.84	19.49	19.33	19.97	20.44
8H	4H	18.72	19.45	19.19	19.89	20.36	18.15	18.88	18.62	19.32	19.79
	6H	19.03	19.63	19.53	20.13	20.60	18.83	19.42	19.32	19.92	20.40
	8H	19.11	19.65	19.63	20.16	20.65	19.08	19.62	19.60	20.13	20.62
	12H	19.15	19.62	19.66	20.11	20.68	19.29	19.77	19.80	20.26	20.83
12H	4H	18.73	19.37	19.21	19.85	20.33	18.15	18.79	18.63	19.27	19.75
	6H	19.05	19.59	19.56	20.10	20.59	18.83	19.37	19.35	19.88	20.37
	8H	19.16	19.64	19.67	20.13	20.70	19.14	19.61	19.65	20.10	20.67