

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: P1059744

Luminaire Tested: S123RDR-H775D835-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

Test Information

Test Method: LM-79-2019
Report Number: P1059744
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-H775D835-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

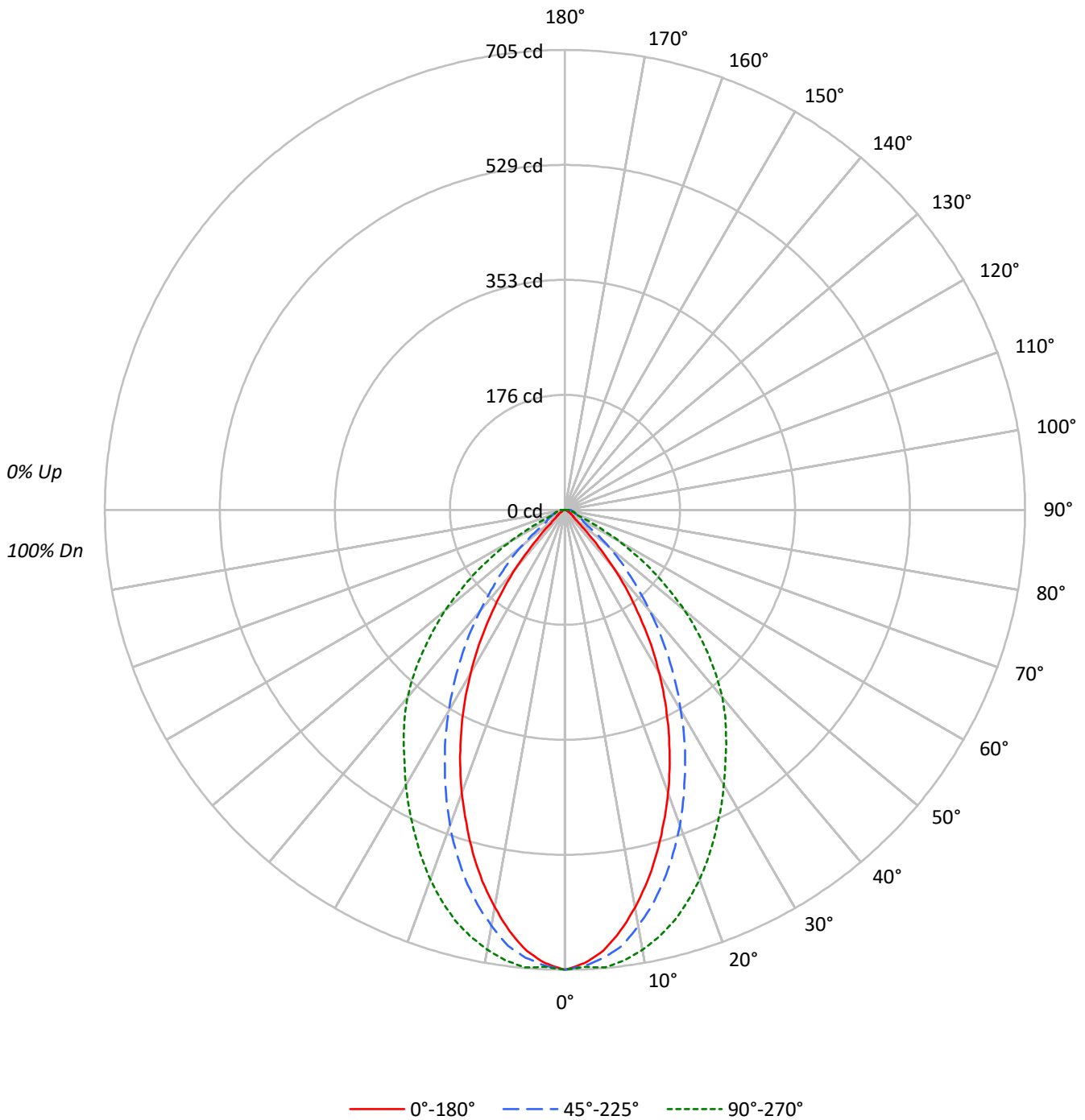
Lumens per Lamp: N/A
Luminaire Lumens: 846.3 lumens
Efficiency: N/A
Efficacy: 36.0 lumens/watt
Spacing Criteria (0/90/45): 0.79 / 1.06 / 0.94
Luminous Opening: Rectangular (W 0.23' x L: 4' x H: 0')
CIE Type: Direct

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	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°	8277	8277	8277
5°	7992	8124	8298
10°	7378	7721	8162
15°	6622	7140	7916
20°	5776	6435	7535
25°	4873	5641	7069
30°	3919	4823	6606
35°	2868	3971	6174
40°	1789	3095	5750
45°	678	2307	5123
50°	322	1591	4366
55°	246	872	3376
60°	174	740	2219
65°	128	645	925
70°	127	604	604
75°	168	631	631
80°	250	751	690
85°	498	1253	997

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 5123 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.7	7.6
10°-20°	165.9	19.6
20°-30°	205.4	24.3
30°-40°	184.1	21.8
40°-50°	120.7	14.3
50°-60°	60.4	7.1
60°-70°	23.6	2.8
70°-80°	13.3	1.6
80°-90°	8.2	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°	436.0	51.5
0°-40°	620.2	73.3
0°-60°	801.3	94.7
0°-90°	846.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	846.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	705	705	705	705	705	
5°	678	689	689	697	704	63
15°	545	567	587	626	651	152
25°	376	399	435	497	546	172
35°	200	227	277	360	431	125
45°	41	66	139	238	308	39
55°	12	15	43	117	165	11
65°	5	14	23	31	33	5
75°	4	14	14	14	14	4
85°	4	9	9	9	7	3
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	704.9	704.9	704.9	704.9	704.9
2.5°	695.6	705.8	699.4	700.3	701.2
5°	678.0	689.2	689.2	696.6	704.0
7.5°	651.2	664.2	673.4	686.4	696.6
10°	618.8	634.5	647.5	670.6	684.5
12.5°	583.6	603.0	619.7	650.3	669.7
15°	544.7	566.9	587.3	626.2	651.2
17.5°	503.0	525.2	552.1	597.5	628.0
20°	462.2	484.5	515.0	566.0	603.0
22.5°	419.6	442.8	475.2	531.7	575.2
25°	376.1	399.2	435.4	497.4	545.6
27.5°	332.5	355.7	396.5	464.1	516.9
30°	289.0	312.2	355.7	427.9	487.2
32.5°	245.5	270.5	315.9	394.6	457.6
35°	200.1	226.9	277.0	360.3	430.7
37.5°	158.4	183.4	239.9	330.7	403.9
40°	116.7	143.6	201.9	302.0	375.1
42.5°	76.0	104.7	167.7	270.5	342.7
45°	40.8	65.8	138.9	238.1	308.5
47.5°	22.2	36.1	112.1	203.8	273.3
50°	17.6	20.4	87.1	174.1	239.0
52.5°	14.8	16.7	62.1	146.4	201.0
55°	12.0	14.8	42.6	116.7	164.9
57.5°	10.2	13.0	33.3	90.8	128.8
60°	7.4	11.1	31.5	66.7	94.5
62.5°	5.6	12.0	27.8	46.3	62.1
65°	4.6	13.9	23.2	30.6	33.3
67.5°	3.7	14.8	20.4	19.5	19.5
70°	3.7	13.9	17.6	16.7	17.6
72.5°	3.7	14.8	15.7	14.8	15.7
75°	3.7	13.9	13.9	13.9	13.9
77.5°	3.7	13.0	13.0	12.0	12.0
80°	3.7	11.1	11.1	11.1	10.2
82.5°	3.7	10.2	10.2	10.2	8.3
85°	3.7	9.3	9.3	9.3	7.4
87.5°	2.8	8.3	9.3	8.3	5.6
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	0.97	0.08	1.28	1.60	13.95	15.20	14.31	15.52	15.83
	3H	2.04	3.15	2.42	3.48	3.84	14.03	15.14	14.41	15.47	15.84
	4H	3.14	4.17	3.54	4.52	4.91	14.11	15.14	14.51	15.49	15.88
	6H	4.13	5.08	4.54	5.45	5.84	14.21	15.16	14.63	15.53	15.93
	8H	4.61	5.51	5.04	5.90	6.30	14.27	15.17	14.70	15.56	15.96
	12H	5.17	6.02	5.60	6.41	6.84	14.35	15.21	14.78	15.59	16.02
4H	2H	2.96	4.00	3.37	4.35	4.73	13.80	14.84	14.21	15.19	15.57
	3H	5.27	6.12	5.68	6.52	6.92	13.98	14.83	14.39	15.23	15.63
	4H	6.64	7.40	7.08	7.82	8.26	14.13	14.89	14.57	15.31	15.75
	6H	7.73	8.38	8.19	8.83	9.29	14.36	15.01	14.82	15.45	15.92
	8H	8.18	8.79	8.65	9.24	9.71	14.48	15.09	14.95	15.54	16.01
	12H	8.68	9.22	9.16	9.70	10.17	14.65	15.19	15.14	15.68	16.15
8H	4H	7.62	8.23	8.09	8.67	9.15	14.13	14.74	14.60	15.19	15.66
	6H	9.14	9.63	9.64	10.13	10.61	14.46	14.96	14.97	15.46	15.94
	8H	9.91	10.36	10.43	10.87	11.37	14.70	15.15	15.22	15.66	16.16
	12H	10.72	11.11	11.23	11.61	12.18	15.03	15.43	15.55	15.93	16.50
12H	4H	7.79	8.33	8.28	8.81	9.29	14.11	14.65	14.60	15.14	15.61
	6H	9.45	9.90	9.97	10.42	10.91	14.48	14.93	15.01	15.45	15.94
	8H	10.41	10.80	10.92	11.30	11.87	14.79	15.19	15.31	15.69	16.26