

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: P1058448

Luminaire Tested: S122RDR-H675D835-X4F0-XX-UDD-BVL-W

Issue Date: 8/7/2025

**Test Information**

Test Method: LM-79-2019  
Report Number: P1058448  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2406-143-57)  
Test Lab: INNOVATION CENTER  
Issue Date: 8/7/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDR-H675D835-X4F0-XX-UDD-BVL-W  
Description: DEFINE 2 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: -

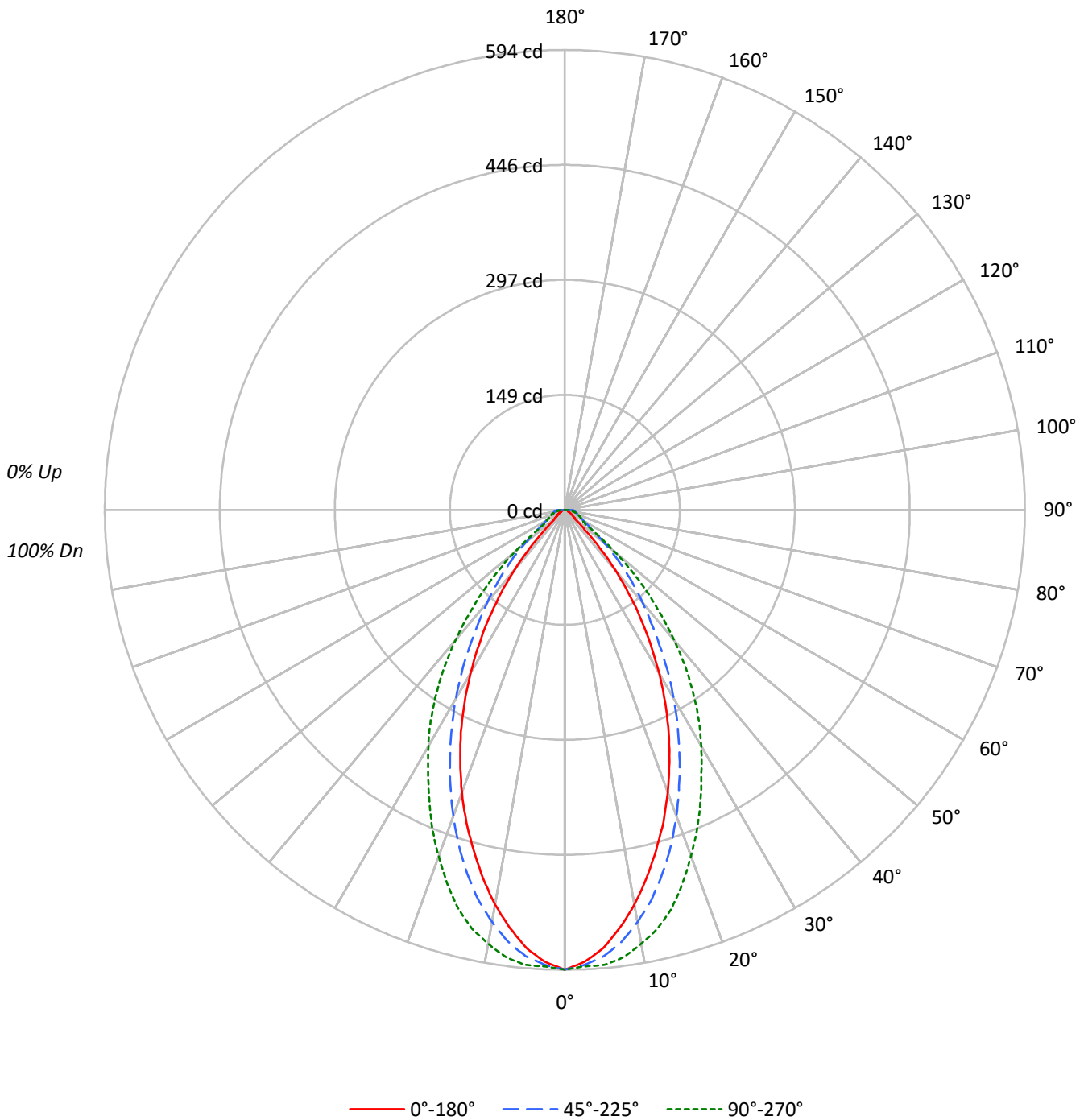
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 646.5 lumens  
Efficiency: N/A  
Efficacy: 27.5 lumens/watt  
Spacing Criteria (0/90/45): 0.78 / 0.96 / 0.91  
Luminous Opening: Rectangular (W 0.15' 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	97	98	96	95	95	93	92	90				
2	105	99	94	90	102	97	92	89	94	90	87	91	87	85	88	85	83	81				
3	98	91	85	80	96	89	84	79	86	82	78	84	80	76	81	78	75	73				
4	92	83	77	72	90	82	76	71	80	75	70	78	73	70	76	72	69	67				
5	87	77	70	65	85	76	70	65	74	69	64	72	67	64	71	66	63	61				
6	82	71	65	60	80	71	64	59	69	63	59	68	62	58	66	62	58	56				
7	77	67	60	55	76	66	59	55	64	59	54	63	58	54	62	57	54	52				
8	73	62	55	51	72	62	55	51	60	54	50	59	54	50	58	53	50	48				
9	69	58	52	47	68	58	51	47	57	51	47	56	50	47	55	50	46	45				
10	66	55	48	44	64	54	48	44	53	48	44	53	47	43	52	47	43	42				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	10959	10959	10959
5°	10525	10719	10930
10°	9702	10129	10665
15°	8694	9294	10182
20°	7631	8265	9347
25°	6462	7138	8435
30°	5182	5994	7511
35°	3832	4794	6508
40°	2404	3753	5287
45°	942	2826	3917
50°	465	1909	2400
55°	367	1255	1071
60°	280	1019	982
65°	210	956	956
70°	259	977	977
75°	271	1084	1020
80°	404	1413	1116
85°	805	2414	1609

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 22.5°  
 Vertical Angle: 87.5°  
 Luminance: 4442 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.2	8.4
10°-20°	137.1	21.2
20°-30°	164.1	25.4
30°-40°	138.1	21.4
40°-50°	78.6	12.2
50°-60°	31.0	4.8
60°-70°	19.6	3.0
70°-80°	14.5	2.2
80°-90°	9.3	1.4
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°	355.4	55.0
0°-40°	493.5	76.3
0°-60°	603.1	93.3
0°-90°	646.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	646.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	594	594	594	594	594	
5°	568	581	579	585	590	53
15°	455	471	486	515	533	127
25°	317	332	351	387	414	145
35°	170	185	213	258	289	105
45°	36	64	108	136	150	34
55°	11	25	39	40	33	10
65°	5	22	22	21	22	5
75°	4	15	15	14	14	4
85°	4	10	11	10	8	3
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	593.9	593.9	593.9	593.9	593.9
2.5°	584.4	594.8	588.2	589.1	590.1
5°	568.2	580.6	578.7	585.3	590.1
7.5°	544.4	557.8	562.5	573.9	582.5
10°	517.8	533.0	540.6	558.7	569.2
12.5°	487.4	504.5	515.9	538.7	554.0
15°	455.1	471.3	486.5	515.0	533.0
17.5°	422.8	439.0	455.1	486.5	505.5
20°	388.6	403.8	420.9	454.2	476.0
22.5°	352.5	368.7	385.8	420.0	446.6
25°	317.4	331.6	350.6	386.7	414.3
27.5°	280.3	294.6	315.5	352.5	382.0
30°	243.2	257.5	281.3	319.3	352.5
32.5°	206.2	221.4	247.0	288.9	322.1
35°	170.1	185.3	212.8	258.4	288.9
37.5°	134.9	152.0	182.4	227.1	255.6
40°	99.8	119.7	155.8	195.7	219.5
42.5°	66.5	91.2	131.1	164.4	184.3
45°	36.1	63.7	108.3	135.9	150.1
47.5°	20.0	40.9	86.5	108.3	116.9
50°	16.2	28.5	66.5	82.7	83.6
52.5°	13.3	25.7	49.4	58.9	54.2
55°	11.4	24.7	39.0	39.9	33.3
57.5°	9.5	23.8	32.3	28.5	28.5
60°	7.6	23.8	27.6	25.7	26.6
62.5°	5.7	23.8	24.7	22.8	23.8
65°	4.8	21.9	21.9	20.9	21.9
67.5°	4.8	20.0	20.0	19.0	20.0
70°	4.8	19.0	18.1	18.1	18.1
72.5°	3.8	17.1	17.1	16.2	16.2
75°	3.8	15.2	15.2	14.3	14.3
77.5°	3.8	14.3	14.3	13.3	12.4
80°	3.8	12.4	13.3	12.4	10.5
82.5°	3.8	11.4	12.4	11.4	8.6
85°	3.8	10.5	11.4	10.5	7.6
87.5°	2.9	10.5	10.5	8.6	5.7
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	6.02	7.24	6.39	7.55	7.87	8.03	9.25	8.40	9.57	9.88
	3H	7.57	8.65	7.95	8.98	9.35	10.01	11.10	10.39	11.43	11.79
	4H	8.12	9.13	8.52	9.48	9.87	10.93	11.94	11.33	12.29	12.68
	6H	8.68	9.61	9.09	9.98	10.37	11.82	12.75	12.23	13.12	13.51
	8H	8.97	9.85	9.40	10.24	10.65	12.22	13.10	12.65	13.49	13.90
	12H	9.33	10.17	9.76	10.55	10.99	12.66	13.51	13.10	13.89	14.32
4H	2H	7.21	8.22	7.61	8.57	8.96	8.66	9.67	9.06	10.02	10.40
	3H	9.41	10.24	9.82	10.65	11.05	10.91	11.74	11.32	12.14	12.55
	4H	10.46	11.21	10.89	11.63	12.07	11.98	12.73	12.42	13.15	13.59
	6H	11.35	12.00	11.82	12.45	12.92	13.09	13.74	13.56	14.19	14.66
	8H	11.74	12.35	12.21	12.79	13.27	13.62	14.22	14.09	14.67	15.14
	12H	12.16	12.69	12.65	13.18	13.65	14.19	14.73	14.68	15.21	15.69
8H	4H	11.26	11.86	11.73	12.31	12.78	12.47	13.08	12.94	13.53	14.00
	6H	12.64	13.14	13.15	13.64	14.12	13.87	14.37	14.38	14.87	15.35
	8H	13.36	13.81	13.89	14.32	14.82	14.61	15.06	15.14	15.58	16.07
	12H	14.11	14.51	14.63	15.00	15.58	15.45	15.84	15.96	16.33	16.91
12H	4H	11.42	11.96	11.91	12.44	12.92	12.57	13.11	13.06	13.59	14.07
	6H	12.98	13.42	13.50	13.94	14.43	14.09	14.54	14.61	15.05	15.55
	8H	13.89	14.28	14.41	14.78	15.35	14.98	15.37	15.49	15.87	16.44