

Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



Scaled data based on original data using  
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-  
State Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055232

Luminaire Tested: S122R3DR-S675D840-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

**Test Information**

Test Method: LM-79-2024  
Report Number: P1055232  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 7/25/2025  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122R3DR-S675D840-X4F0-XX-UDD-F-W  
Description: DEFINE 2, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS  
CORE LIGHT ENGINE  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: -

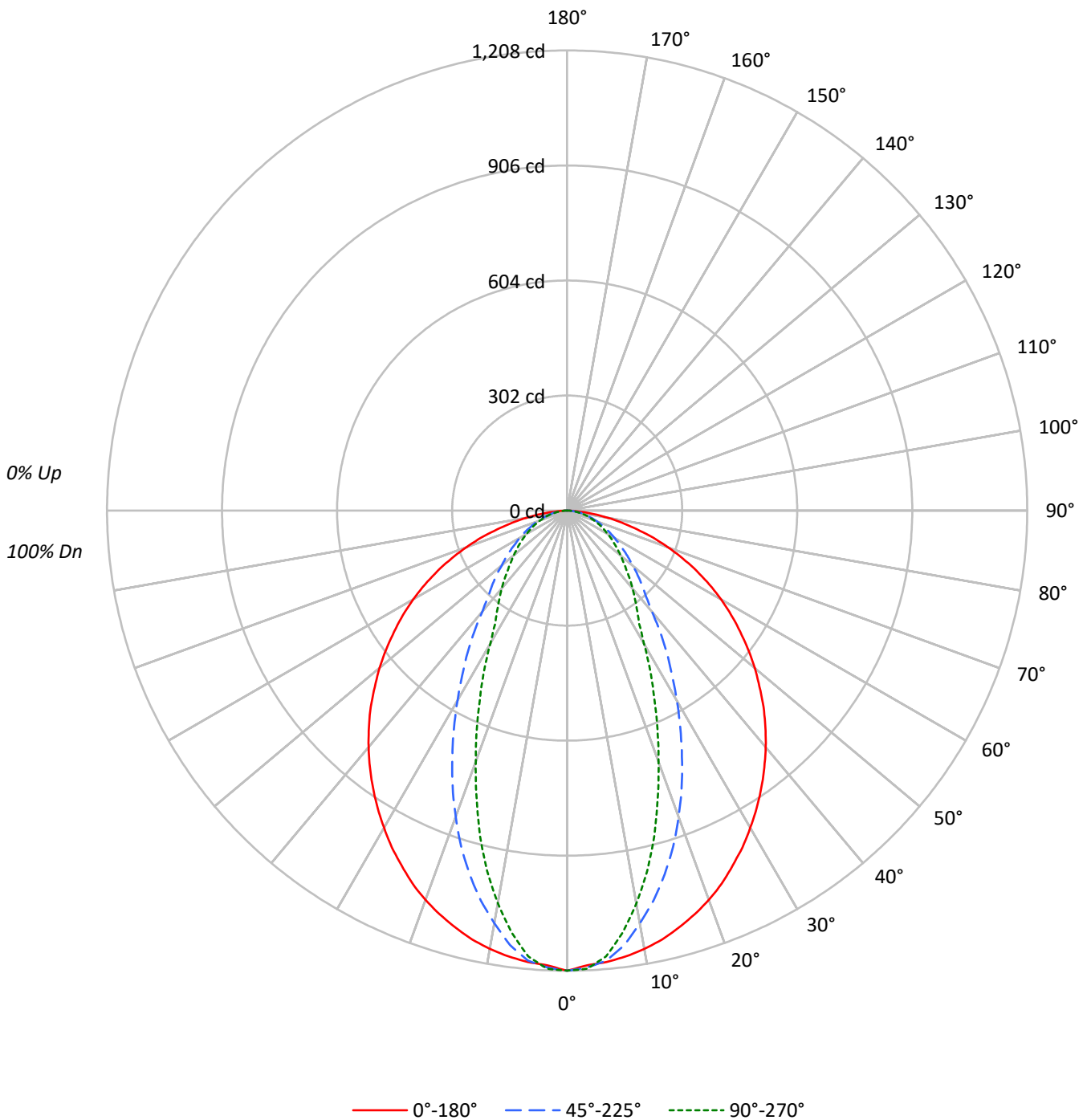
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1826.9 lumens  
Efficiency: N/A  
Efficacy: 69.2 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 0.71 / 0.9  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 26.4  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	110	106	102	99	108	104	101	97	100	97	94	96	94	92	92	91	89	87
2	102	95	89	84	99	93	87	83	89	85	81	86	82	79	83	80	77	75
3	94	85	78	72	92	83	77	71	80	75	70	78	73	69	75	71	68	66
4	87	76	69	63	85	75	68	62	73	66	61	71	65	61	68	64	60	58
5	81	69	61	55	79	68	61	55	66	60	55	64	59	54	63	58	54	52
6	75	63	55	50	74	63	55	49	61	54	49	59	53	49	58	52	48	46
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	43	37	61	49	42	37	48	42	37	47	41	37	46	41	37	35
10	59	47	39	35	58	46	39	34	45	39	34	44	38	34	43	38	34	32

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

	0°	45°	90°
0°	22883	22883	22883
5°	22624	22548	22337
10°	22478	21156	20146
15°	22225	19393	17331
20°	21928	17246	14152
25°	21490	14905	11295
30°	21032	12592	8814
35°	20554	10533	7403
40°	20055	8542	6594
45°	19535	7467	5900
50°	18961	6608	5388
55°	18312	5972	5004
60°	17680	5434	4668
65°	16843	4981	4393
70°	15610	4642	4138
75°	13820	4216	3916
80°	11794	3971	3633
85°	8130	3522	3282

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 19535 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	110.7	6.1
10°-20°	279.4	15.3
20°-30°	344.3	18.8
30°-40°	330.3	18.1
40°-50°	284.9	15.6
50°-60°	221.1	12.1
60°-70°	151.4	8.3
70°-80°	82.2	4.5
80°-90°	22.5	1.2
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°	734.4	40.2
0°-40°	1064.8	58.3
0°-60°	1570.8	86.0
0°-90°	1826.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1826.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1208	1208	1208	1208	1208	
5°	1190	1207	1186	1170	1174	113
15°	1133	1099	989	908	884	320
25°	1028	918	713	582	540	474
35°	889	705	455	339	320	556
45°	729	491	279	230	220	562
55°	554	295	181	156	152	496
65°	376	161	111	101	98	371
75°	189	74	58	54	54	202
85°	37	18	16	16	15	48
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1207.8	1207.8	1207.8	1207.8	1207.8
2.5°	1194.7	1214.9	1200.7	1200.7	1203.8
5°	1189.6	1206.8	1185.6	1170.4	1174.5
7.5°	1180.5	1192.7	1150.2	1117.9	1116.9
10°	1168.4	1169.4	1099.7	1057.3	1047.2
12.5°	1153.3	1137.1	1048.2	984.6	969.5
15°	1133.1	1098.7	988.7	907.9	883.6
17.5°	1111.9	1059.3	925.0	824.1	790.7
20°	1087.6	1011.9	855.4	740.2	701.9
22.5°	1060.4	966.4	785.7	659.4	619.0
25°	1028.0	918.0	713.0	581.7	540.3
27.5°	996.7	868.5	643.3	513.0	470.6
30°	961.4	815.0	575.6	447.4	402.9
32.5°	926.0	760.4	513.0	384.8	351.4
35°	888.7	704.9	455.4	339.3	320.1
37.5°	850.3	650.4	400.9	309.0	291.9
40°	810.9	595.8	345.4	279.7	266.6
42.5°	770.5	542.3	307.0	255.5	243.4
45°	729.1	490.8	278.7	230.2	220.2
47.5°	684.7	439.3	251.5	209.0	200.0
50°	643.3	389.8	224.2	189.9	182.8
52.5°	598.9	341.3	202.0	172.7	166.6
55°	554.4	294.9	180.8	156.5	151.5
57.5°	511.0	250.4	160.6	141.4	137.3
60°	466.6	215.1	143.4	127.2	123.2
62.5°	421.1	186.8	127.2	114.1	110.1
65°	375.7	160.6	111.1	101.0	98.0
67.5°	328.2	135.3	96.9	88.9	86.8
70°	281.8	113.1	83.8	76.7	74.7
72.5°	236.3	91.9	70.7	65.6	63.6
75°	188.8	73.7	57.6	54.5	53.5
77.5°	147.4	57.6	46.5	44.4	43.4
80°	108.1	42.4	36.4	34.3	33.3
82.5°	71.7	29.3	26.3	25.2	24.2
85°	37.4	18.2	16.2	16.2	15.1
87.5°	12.1	8.1	8.1	8.1	7.1
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	20.48	21.95	20.85	22.27	22.58	15.29	16.76	15.66	17.07	17.39
	3H	22.81	24.13	23.19	24.46	24.82	16.94	18.25	17.32	18.58	18.94
	4H	23.71	24.94	24.11	25.29	25.67	17.57	18.81	17.97	19.16	19.54
	6H	24.37	25.51	24.78	25.88	26.27	18.07	19.21	18.48	19.57	19.97
	8H	24.58	25.66	25.01	26.05	26.46	18.23	19.32	18.66	19.71	20.11
	12H	24.70	25.73	25.13	26.12	26.55	18.35	19.39	18.78	19.77	20.20
4H	2H	20.50	21.74	20.90	22.08	22.46	16.01	17.24	16.41	17.59	17.97
	3H	22.91	23.94	23.32	24.34	24.74	17.85	18.88	18.26	19.28	19.68
	4H	23.84	24.77	24.28	25.18	25.62	18.60	19.52	19.03	19.94	20.38
	6H	24.62	25.42	25.08	25.87	26.33	19.21	20.02	19.67	20.46	20.92
	8H	24.89	25.64	25.36	26.09	26.55	19.43	20.18	19.89	20.62	21.09
	12H	25.07	25.74	25.55	26.22	26.69	19.59	20.26	20.07	20.74	21.21
8H	4H	23.84	24.59	24.30	25.03	25.50	18.98	19.73	19.44	20.17	20.64
	6H	24.64	25.26	25.14	25.75	26.23	19.72	20.33	20.21	20.83	21.30
	8H	24.95	25.50	25.46	26.01	26.50	20.01	20.56	20.53	21.08	21.56
	12H	25.18	25.67	25.69	26.16	26.72	20.25	20.74	20.77	21.24	21.80
12H	4H	23.82	24.48	24.30	24.96	25.44	19.04	19.70	19.52	20.18	20.66
	6H	24.62	25.17	25.13	25.68	26.17	19.80	20.36	20.32	20.87	21.36
	8H	24.95	25.44	25.46	25.94	26.50	20.16	20.65	20.67	21.14	21.71