

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: P1439628

Luminaire Tested: S122DR-H1005D850-X4F0-XX-UDD-FLB-W

Issue Date: 4/2/2026

**Test Information**

Test Method: LM-79-2024  
Report Number: P1439628  
TEST IS SCALED FROM IESNA LM-79-24 TEST DATA (G2-2602-702-1)  
Test Lab: INNOVATION CENTER  
Issue Date: 4/2/2026  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122DR-H1005D850-X4F0-XX-UDD-FLB-W  
Description: DEFINE 2, DIRECT RECESSED WITH BATWING FLUSH OPTIC  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

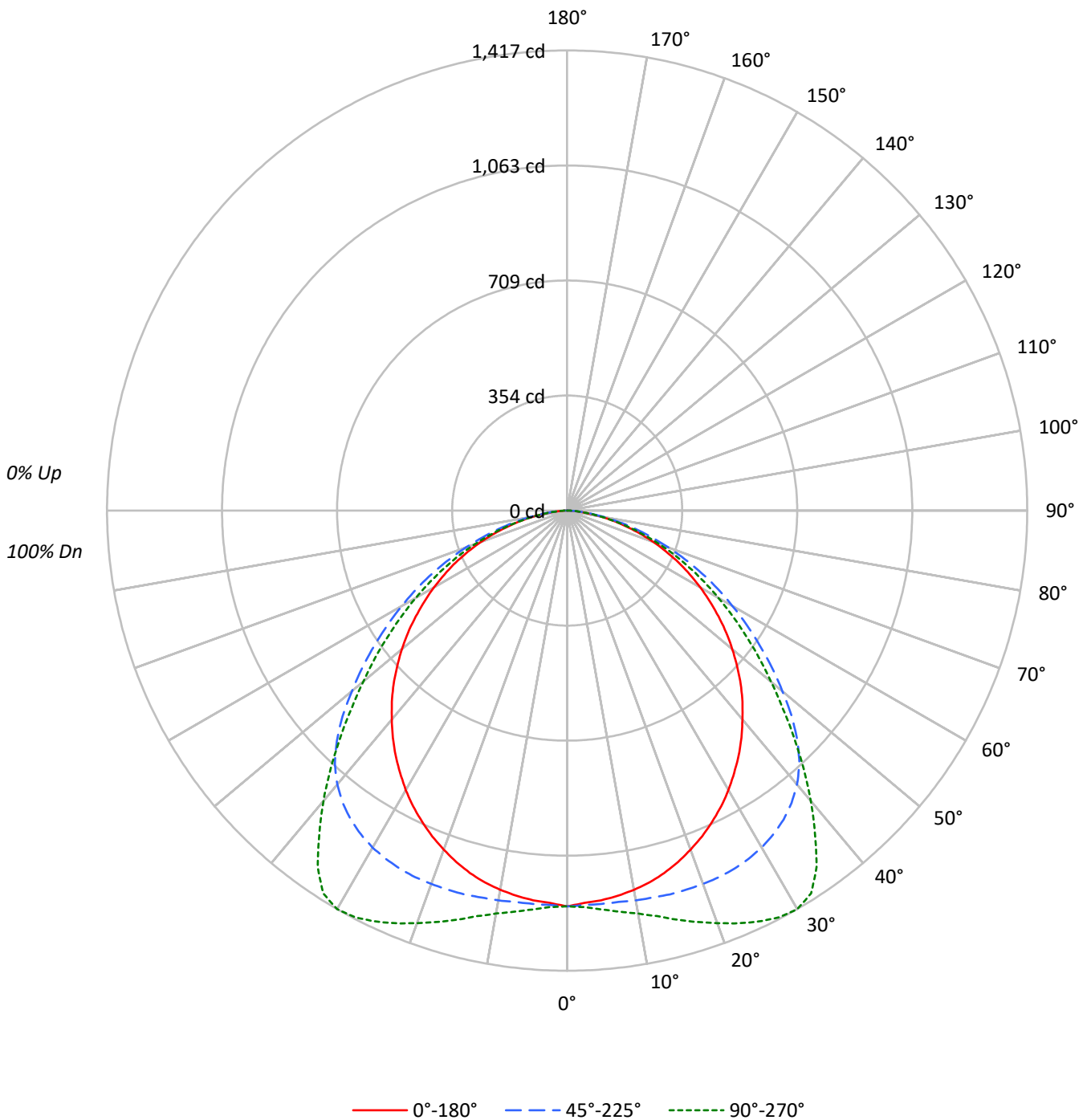
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3748.4 lumens  
Efficiency: N/A  
Efficacy: 102.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.56 / 1.51  
Luminous Opening: Rectangular (W 0.15' x L: 3.9' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 36.6  
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	109	105	101	97	107	102	99	95	98	95	92	94	92	89	91	89	87	85
2	100	91	85	79	97	90	84	78	86	81	76	83	79	75	80	76	73	71
3	91	80	72	66	88	79	71	66	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	60	55	65	59	54	63	58	53	51
5	76	64	55	48	74	63	54	48	61	53	47	59	52	47	57	51	46	44
6	71	57	48	42	69	56	48	42	55	47	42	53	46	41	51	45	41	39
7	65	52	43	37	64	51	43	37	50	42	37	48	41	36	47	41	36	34
8	61	47	39	33	59	47	39	33	45	38	33	44	37	33	43	37	32	30
9	57	43	35	30	55	43	35	30	42	34	29	41	34	29	40	34	29	27
10	53	40	32	27	52	39	32	27	38	31	27	38	31	26	37	31	26	25

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

	0°	45°	90°
0°	23091	23091	23091
5°	22907	23119	23449
10°	22807	23447	24240
15°	22662	23998	25583
20°	22400	24668	27257
25°	22098	25445	29189
30°	21739	26213	30997
35°	21297	26869	30974
40°	20775	27242	28887
45°	20256	26879	26456
50°	19574	25504	24151
55°	18795	23924	22197
60°	17957	22280	20420
65°	16981	20532	18613
70°	15627	18346	16679
75°	13806	15892	14384
80°	11412	12623	11412
85°	7587	8260	7934

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 67.5°  
 Vertical Angle: 45°  
 Luminance: 27091 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	116.6	3.1
10°-20°	348.1	9.3
20°-30°	564.9	15.1
30°-40°	714.7	19.1
40°-50°	715.8	19.1
50°-60°	599.5	16.0
60°-70°	422.5	11.3
70°-80°	218.0	5.8
80°-90°	48.3	1.3
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°	1029.5	27.5
0°-40°	1744.3	46.5
0°-60°	3059.6	81.6
0°-90°	3748.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3748.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1219	1219	1219	1219	1219	
5°	1204	1225	1216	1222	1233	114
15°	1155	1189	1224	1273	1304	326
25°	1057	1114	1217	1336	1396	487
35°	921	995	1162	1312	1339	575
45°	756	835	1003	1011	987	582
55°	569	639	724	694	672	509
65°	379	422	458	430	415	374
75°	189	208	217	201	196	201
85°	35	38	38	38	36	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1218.8	1218.8	1218.8	1218.8	1218.8
2.5°	1209.2	1228.3	1215.6	1217.2	1221.9
5°	1204.5	1225.1	1215.6	1221.9	1233.0
7.5°	1196.6	1218.8	1215.6	1228.3	1245.7
10°	1185.5	1210.8	1218.8	1240.9	1260.0
12.5°	1172.8	1199.7	1220.3	1255.2	1279.0
15°	1155.4	1188.6	1223.5	1272.6	1304.3
17.5°	1134.8	1174.4	1223.5	1291.7	1328.1
20°	1111.0	1156.9	1223.5	1307.5	1351.9
22.5°	1085.6	1136.3	1221.9	1321.8	1375.7
25°	1057.1	1114.2	1217.2	1336.0	1396.3
27.5°	1027.0	1088.8	1209.2	1347.1	1412.1
30°	993.7	1060.3	1198.2	1351.9	1416.9
32.5°	957.3	1030.2	1182.3	1342.4	1397.8
35°	920.8	995.3	1161.7	1312.3	1339.2
37.5°	881.2	958.8	1134.8	1253.6	1253.6
40°	840.0	919.2	1101.5	1172.8	1168.0
42.5°	798.8	878.0	1058.7	1093.6	1077.7
45°	756.0	835.2	1003.2	1011.1	987.4
47.5°	710.0	787.7	938.2	927.1	900.2
50°	664.1	740.1	865.3	846.3	819.4
52.5°	618.1	691.0	795.6	768.7	744.9
55°	569.0	638.7	724.3	694.2	672.0
57.5°	521.4	586.4	656.1	622.8	603.8
60°	473.9	532.5	588.0	556.3	538.9
62.5°	426.3	477.0	523.0	491.3	475.5
65°	378.8	421.6	458.0	429.5	415.2
67.5°	329.7	367.7	393.0	367.7	358.2
70°	282.1	312.2	331.2	309.0	301.1
72.5°	234.6	259.9	272.6	255.2	247.2
75°	188.6	207.6	217.1	201.3	196.5
77.5°	144.2	158.5	163.2	152.1	145.8
80°	104.6	112.5	115.7	107.8	104.6
82.5°	65.0	71.3	74.5	68.1	66.6
85°	34.9	38.0	38.0	38.0	36.5
87.5°	12.7	15.8	15.8	15.8	14.3
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	22.39	24.00	22.76	24.32	24.63	22.90	24.52	23.27	24.83	25.15
	3H	23.96	25.42	24.34	25.74	26.10	24.37	25.83	24.75	26.15	26.51
	4H	24.50	25.87	24.90	26.21	26.59	24.87	26.23	25.26	26.58	26.96
	6H	24.84	26.11	25.25	26.47	26.86	25.17	26.43	25.58	26.80	27.19
	8H	24.93	26.13	25.35	26.52	26.92	25.24	26.45	25.66	26.84	27.23
	12H	24.96	26.12	25.39	26.50	26.93	25.27	26.43	25.70	26.81	27.24
4H	2H	23.15	24.51	23.54	24.86	25.24	23.54	24.91	23.94	25.26	25.63
	3H	24.92	26.06	25.33	26.46	26.86	25.21	26.35	25.62	26.75	27.15
	4H	25.57	26.59	26.00	27.01	27.44	25.80	26.83	26.24	27.25	27.68
	6H	26.01	26.90	26.46	27.34	27.80	26.20	27.10	26.66	27.54	27.99
	8H	26.12	26.96	26.58	27.40	27.86	26.30	27.14	26.76	27.58	28.05
	12H	26.18	26.93	26.66	27.41	27.88	26.36	27.11	26.84	27.59	28.06
8H	4H	25.85	26.68	26.31	27.13	27.59	26.06	26.90	26.52	27.34	27.81
	6H	26.39	27.08	26.88	27.57	28.04	26.55	27.24	27.04	27.73	28.21
	8H	26.55	27.17	27.06	27.68	28.16	26.69	27.31	27.20	27.82	28.31
	12H	26.65	27.20	27.16	27.69	28.25	26.79	27.34	27.30	27.83	28.39
12H	4H	25.86	26.61	26.34	27.09	27.56	26.08	26.83	26.56	27.31	27.77
	6H	26.41	27.04	26.93	27.55	28.03	26.57	27.20	27.08	27.70	28.19
	8H	26.62	27.17	27.13	27.66	28.22	26.76	27.31	27.27	27.80	28.37