

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: P243217

Luminaire Tested: S122RDRP-H1005D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-2024  
Report Number: P243217  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-63)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: S122RDRP-H1005D927-X4F0-XX-UDD-F-W  
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.  
HIGH PERFORMANCE LIGHT ENGINE  
Light Source: (184) 2700K CCT, 90 CRI LEDS  
Ballast/Driver: -

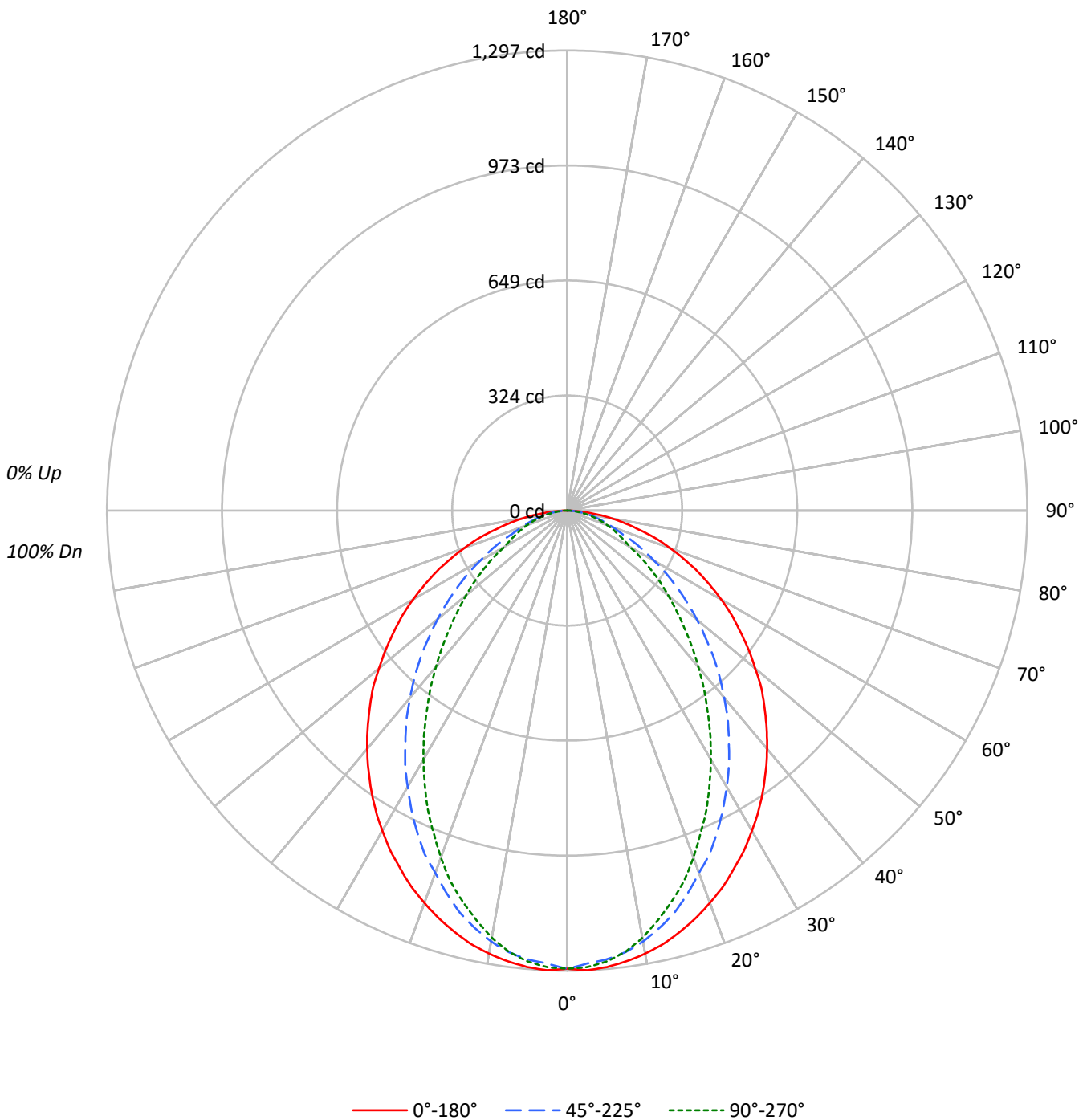
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 2648.6 lumens  
Efficiency: N/A  
Efficacy: 70.3 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16  
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 37.7  
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	110	106	102	98	107	103	100	97	99	96	94	95	93	91	92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79	85	81	77	82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68	76	71	67	74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59	69	63	58	66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52	62	56	51	60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46	57	50	46	55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41	52	46	41	51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37	48	42	37	47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34	44	38	34	44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31	41	35	31	41	35	31	29

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

	0°	45°	90°
0°	24600	24600	24600
5°	24694	24289	24396
10°	24527	23858	23643
15°	24237	23115	22478
20°	23852	22021	21097
25°	23396	21029	19531
30°	22916	19777	17818
35°	22388	18474	16038
40°	21807	17122	14297
45°	21192	15699	12577
50°	20506	14132	11029
55°	19796	12583	9511
60°	19143	10823	7768
65°	18281	9140	7180
70°	17192	7569	6700
75°	15661	6888	6153
80°	14051	6110	5496
85°	11692	5114	4874

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 21192 cd/sqm

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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	121.0	4.6
10°-20°	331.5	12.5
20°-30°	465.1	17.6
30°-40°	506.6	19.1
40°-50°	465.6	17.6
50°-60°	365.4	13.8
60°-70°	238.4	9.0
70°-80°	123.3	4.7
80°-90°	31.9	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°	917.5	34.6
0°-40°	1424.1	53.8
0°-60°	2255.1	85.1
0°-90°	2648.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2648.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1292	1292	1292	1292	1292	
5°	1292	1285	1270	1279	1276	122
15°	1229	1215	1172	1149	1140	346
25°	1113	1074	1001	952	929	513
35°	963	899	794	721	690	602
45°	787	706	583	498	467	607
55°	596	507	379	308	286	534
65°	406	308	203	165	159	401
75°	213	133	94	86	84	228
85°	54	26	23	22	22	62
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1291.5	1291.5	1291.5	1291.5	1291.5
2.5°	1297.0	1291.5	1278.1	1290.4	1288.1
5°	1291.5	1284.8	1270.3	1279.2	1275.9
7.5°	1281.4	1274.8	1255.8	1260.3	1254.7
10°	1268.1	1259.2	1233.5	1229.1	1222.4
12.5°	1251.4	1239.1	1204.6	1191.2	1182.3
15°	1229.1	1214.6	1172.2	1148.8	1139.9
17.5°	1204.6	1183.4	1131.0	1104.3	1095.4
20°	1176.7	1152.2	1086.4	1058.6	1040.8
22.5°	1147.7	1116.5	1048.6	1005.1	983.9
25°	1113.2	1074.2	1000.6	951.6	929.3
27.5°	1079.8	1034.1	950.5	893.7	869.2
30°	1041.9	991.7	899.2	833.5	810.1
32.5°	1004.0	946.0	849.1	777.8	751.0
35°	962.8	899.2	794.5	720.9	689.7
37.5°	920.4	854.7	744.4	663.0	632.9
40°	877.0	803.4	688.6	603.9	575.0
42.5°	832.4	757.7	636.3	549.3	521.5
45°	786.7	706.5	582.8	498.1	466.9
47.5°	743.2	656.3	528.2	447.9	417.9
50°	692.0	606.2	476.9	395.6	372.2
52.5°	645.2	556.0	426.8	348.8	328.7
55°	596.1	507.0	378.9	307.5	286.4
57.5°	550.5	455.7	330.9	266.3	246.3
60°	502.5	406.7	284.1	225.1	203.9
62.5°	452.4	356.6	242.9	187.2	180.5
65°	405.6	307.5	202.8	164.9	159.3
67.5°	355.5	261.9	161.6	144.9	139.3
70°	308.7	217.3	135.9	123.7	120.3
72.5°	263.0	174.9	114.8	104.7	101.4
75°	212.8	132.6	93.6	85.8	83.6
77.5°	169.4	93.6	74.7	69.1	66.9
80°	128.1	68.0	55.7	52.4	50.1
82.5°	88.0	45.7	39.0	36.8	35.7
85°	53.5	25.6	23.4	22.3	22.3
87.5°	21.2	10.0	10.0	8.9	8.9
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	22.37	23.90	22.74	24.21	24.52	18.26	19.78	18.62	20.10	20.41
	3H	24.14	25.51	24.52	25.83	26.20	19.55	20.92	19.93	21.25	21.61
	4H	24.80	26.08	25.20	26.43	26.81	20.06	21.34	20.46	21.69	22.07
	6H	25.29	26.48	25.70	26.84	27.23	20.44	21.63	20.86	21.99	22.39
	8H	25.46	26.58	25.88	26.97	27.37	20.57	21.69	20.99	22.08	22.48
	12H	25.57	26.64	26.00	27.03	27.46	20.65	21.73	21.08	22.11	22.54
4H	2H	22.48	23.76	22.87	24.10	24.48	18.97	20.25	19.37	20.60	20.97
	3H	24.41	25.48	24.82	25.88	26.28	20.44	21.50	20.85	21.90	22.30
	4H	25.16	26.11	25.59	26.53	26.97	21.04	22.00	21.48	22.42	22.86
	6H	25.75	26.58	26.21	27.02	27.48	21.54	22.37	21.99	22.81	23.27
	8H	25.96	26.74	26.43	27.18	27.65	21.70	22.48	22.16	22.92	23.39
	12H	26.12	26.82	26.61	27.30	27.77	21.82	22.51	22.30	22.99	23.46
8H	4H	25.18	25.96	25.65	26.40	26.87	21.41	22.18	21.87	22.63	23.10
	6H	25.82	26.46	26.32	26.95	27.43	22.00	22.64	22.50	23.13	23.61
	8H	26.07	26.65	26.58	27.16	27.64	22.22	22.80	22.74	23.31	23.80
	12H	26.28	26.79	26.79	27.29	27.85	22.40	22.91	22.91	23.40	23.97
12H	4H	25.17	25.86	25.65	26.34	26.81	21.45	22.14	21.93	22.62	23.09
	6H	25.80	26.38	26.31	26.89	27.38	22.06	22.64	22.58	23.15	23.64
	8H	26.08	26.59	26.59	27.09	27.65	22.34	22.85	22.85	23.34	23.91