

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: P243231

Luminaire Tested: S122RDRP-H1005D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243231
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-H1005D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 REGRESSED DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

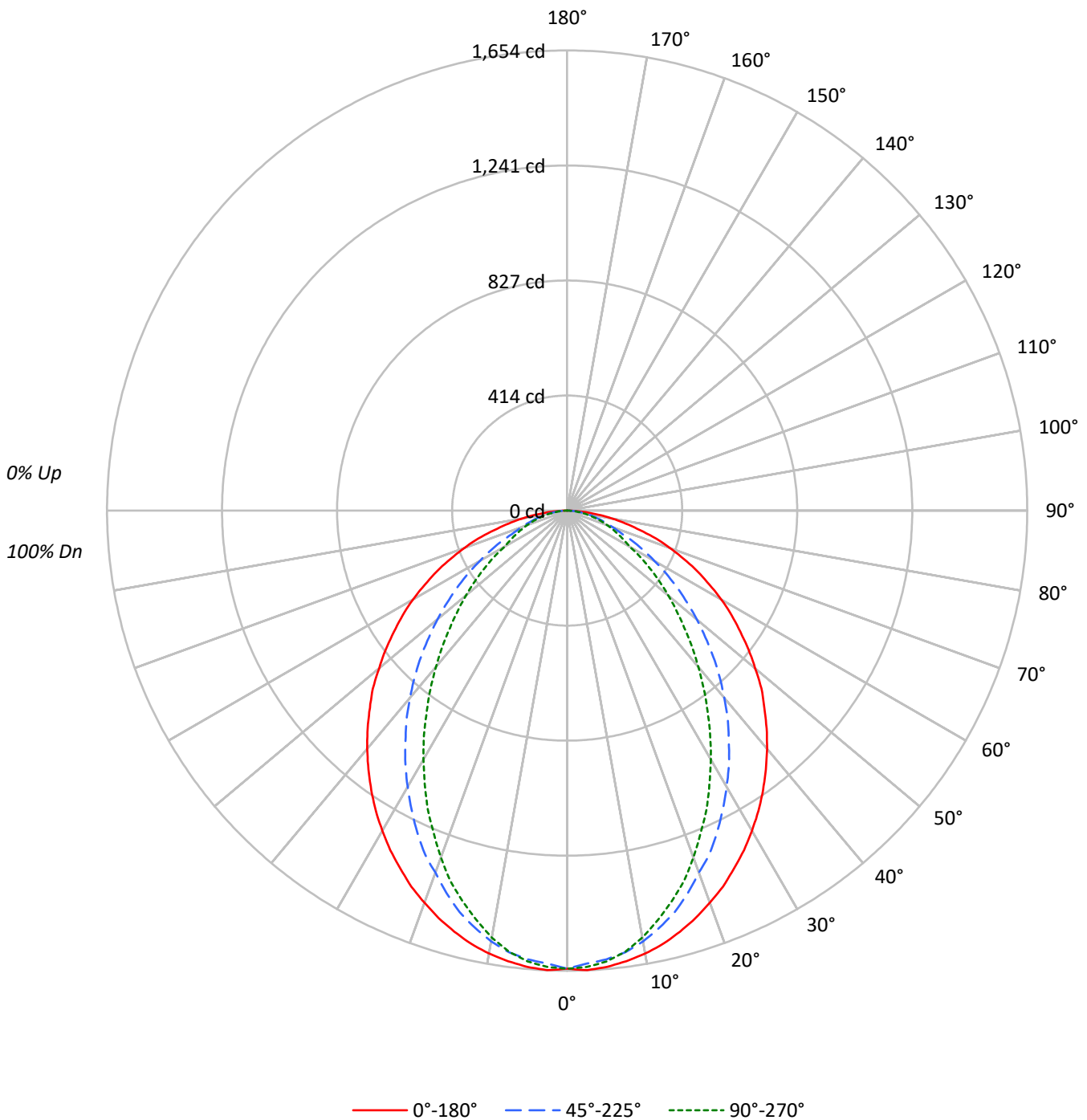
Lumens per Lamp: N/A
Luminaire Lumens: 3376.4 lumens
Efficiency: N/A
Efficacy: 89.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

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°	31360	31360	31360
5°	31480	30964	31099
10°	31266	30415	30140
15°	30897	29469	28657
20°	30405	28074	26892
25°	29825	26809	24899
30°	29213	25212	22714
35°	28538	23551	20446
40°	27797	21829	18226
45°	27016	20012	16033
50°	26139	18017	14058
55°	25239	16040	12124
60°	24404	13798	9905
65°	23306	11651	9154
70°	21915	9651	8543
75°	19966	8780	7838
80°	17924	7788	7009
85°	14905	6513	6207

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 27016 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.2	4.6
10°-20°	422.6	12.5
20°-30°	592.8	17.6
30°-40°	645.8	19.1
40°-50°	593.6	17.6
50°-60°	465.8	13.8
60°-70°	303.9	9.0
70°-80°	157.1	4.7
80°-90°	40.7	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°	1169.7	34.6
0°-40°	1815.4	53.8
0°-60°	2874.7	85.1
0°-90°	3376.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3376.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1646	1646	1646	1646	1646	
5°	1646	1638	1619	1631	1626	156
15°	1567	1548	1494	1464	1453	442
25°	1419	1369	1276	1213	1185	654
35°	1227	1146	1013	919	879	768
45°	1003	901	743	635	595	774
55°	760	646	483	392	365	681
65°	517	392	258	210	203	511
75°	271	169	119	109	106	290
85°	68	33	30	28	28	79
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1646.4	1646.4	1646.4	1646.4	1646.4
2.5°	1653.5	1646.4	1629.3	1644.9	1642.1
5°	1646.4	1637.8	1619.4	1630.7	1626.5
7.5°	1633.6	1625.0	1600.9	1606.6	1599.5
10°	1616.5	1605.2	1572.5	1566.8	1558.3
12.5°	1595.2	1579.6	1535.6	1518.5	1507.1
15°	1566.8	1548.3	1494.4	1464.5	1453.2
17.5°	1535.6	1508.6	1441.8	1407.7	1396.3
20°	1500.0	1468.8	1385.0	1349.5	1326.7
22.5°	1463.1	1423.3	1336.7	1281.3	1254.3
25°	1419.1	1369.4	1275.6	1213.1	1184.7
27.5°	1376.5	1318.2	1211.7	1139.2	1108.0
30°	1328.2	1264.2	1146.3	1062.5	1032.7
32.5°	1279.9	1206.0	1082.4	991.5	957.4
35°	1227.3	1146.3	1012.8	919.1	879.3
37.5°	1173.3	1089.5	948.9	845.2	806.8
40°	1117.9	1024.2	877.9	769.9	733.0
42.5°	1061.1	965.9	811.1	700.3	664.8
45°	1002.9	900.6	742.9	635.0	595.2
47.5°	947.5	836.7	673.3	571.0	532.7
50°	882.1	772.7	608.0	504.3	474.4
52.5°	822.5	708.8	544.0	444.6	419.0
55°	760.0	646.3	483.0	392.1	365.1
57.5°	701.7	581.0	421.9	339.5	313.9
60°	640.6	518.5	362.2	286.9	260.0
62.5°	576.7	454.6	309.7	238.6	230.1
65°	517.1	392.1	258.5	210.2	203.1
67.5°	453.1	333.8	206.0	184.7	177.6
70°	393.5	277.0	173.3	157.7	153.4
72.5°	335.2	223.0	146.3	133.5	129.3
75°	271.3	169.0	119.3	109.4	106.5
77.5°	215.9	119.3	95.2	88.1	85.2
80°	163.4	86.7	71.0	66.8	63.9
82.5°	112.2	58.2	49.7	46.9	45.5
85°	68.2	32.7	29.8	28.4	28.4
87.5°	27.0	12.8	12.8	11.4	11.4
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	23.22	24.74	23.58	25.05	25.37	19.10	20.63	19.47	20.94	21.25
	3H	24.98	26.35	25.36	26.68	27.04	20.40	21.76	20.78	22.09	22.45
	4H	25.65	26.93	26.05	27.28	27.65	20.90	22.19	21.30	22.53	22.91
	6H	26.14	27.32	26.55	27.69	28.08	21.29	22.47	21.70	22.84	23.23
	8H	26.30	27.43	26.73	27.82	28.22	21.41	22.54	21.84	22.93	23.33
	12H	26.41	27.49	26.84	27.87	28.30	21.49	22.57	21.92	22.95	23.38
4H	2H	23.32	24.60	23.72	24.95	25.33	19.81	21.09	20.21	21.44	21.82
	3H	25.26	26.32	25.67	26.72	27.12	21.28	22.34	21.69	22.74	23.15
	4H	26.00	26.96	26.43	27.37	27.81	21.89	22.85	22.32	23.26	23.70
	6H	26.59	27.42	27.05	27.87	28.33	22.38	23.21	22.84	23.66	24.11
	8H	26.81	27.58	27.27	28.03	28.49	22.54	23.32	23.00	23.76	24.23
	12H	26.97	27.66	27.45	28.14	28.61	22.66	23.35	23.14	23.83	24.30
8H	4H	26.03	26.80	26.49	27.25	27.71	22.25	23.03	22.71	23.47	23.94
	6H	26.66	27.31	27.16	27.80	28.27	22.84	23.49	23.34	23.98	24.45
	8H	26.91	27.49	27.43	28.00	28.49	23.06	23.64	23.58	24.15	24.64
	12H	27.13	27.64	27.64	28.13	28.69	23.25	23.76	23.76	24.25	24.81
12H	4H	26.01	26.71	26.49	27.18	27.65	22.29	22.99	22.77	23.47	23.94
	6H	26.64	27.22	27.16	27.73	28.22	22.91	23.48	23.42	23.99	24.48
	8H	26.93	27.44	27.44	27.93	28.49	23.18	23.69	23.69	24.19	24.75