

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: P243128

Luminaire Tested: S122DRP-H1005D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243128
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-48)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-H1005D840-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

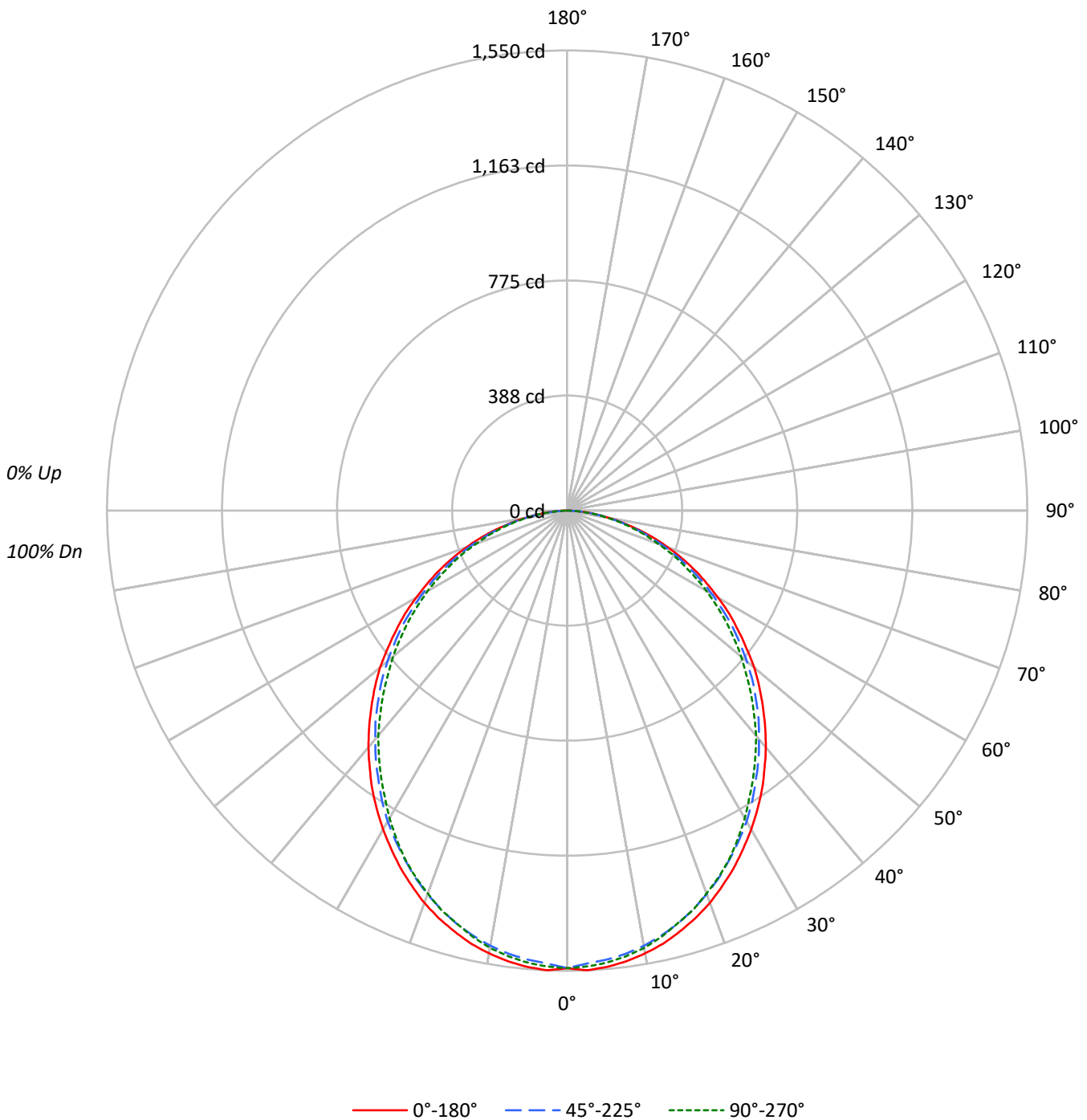
Lumens per Lamp: N/A
Luminaire Lumens: 3921.8 lumens
Efficiency: N/A
Efficacy: 104.0 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

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	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	29356	29356	29356
5°	29497	29034	29226
10°	29287	28794	28931
15°	28937	28404	28377
20°	28506	27871	27815
25°	27915	27227	27198
30°	27275	26587	26308
35°	26622	25764	25434
40°	25889	25007	24619
45°	25100	24222	23608
50°	24373	23404	22687
55°	23349	22549	21699
60°	22351	21482	20671
65°	21382	20358	19462
70°	20094	19063	18117
75°	18296	17560	16728
80°	15894	15423	14797
85°	13659	12108	11168

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 25100 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	145.1	3.7
10°-20°	408.5	10.4
20°-30°	600.6	15.3
30°-40°	697.3	17.8
40°-50°	696.4	17.8
50°-60°	606.5	15.5
60°-70°	448.6	11.4
70°-80°	252.9	6.4
80°-90°	66.0	1.7
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°	1154.2	29.4
0°-40°	1851.5	47.2
0°-60°	3154.5	80.4
0°-90°	3921.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3921.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1541	1541	1541	1541	1541	
5°	1543	1536	1518	1531	1528	146
15°	1467	1460	1440	1446	1439	414
25°	1328	1317	1296	1294	1294	611
35°	1145	1132	1108	1098	1094	715
45°	932	922	899	885	876	720
55°	703	698	679	660	653	630
65°	474	467	452	438	432	469
75°	249	247	239	230	227	264
85°	62	60	55	53	51	71
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1541.2	1541.2	1541.2	1541.2	1541.2
2.5°	1549.8	1542.7	1527.0	1539.8	1537.0
5°	1542.7	1535.6	1518.5	1531.3	1528.5
7.5°	1531.3	1524.2	1505.7	1518.5	1514.2
10°	1514.2	1505.7	1488.7	1497.2	1495.8
12.5°	1494.4	1485.8	1466.0	1473.1	1470.2
15°	1467.4	1460.3	1440.4	1446.1	1439.0
17.5°	1439.0	1427.6	1409.1	1414.8	1410.6
20°	1406.3	1394.9	1375.0	1377.9	1372.2
22.5°	1367.9	1356.6	1338.1	1338.1	1335.3
25°	1328.2	1316.8	1295.5	1294.1	1294.1
27.5°	1284.1	1274.2	1252.9	1248.6	1245.8
30°	1240.1	1231.6	1208.8	1200.3	1196.1
32.5°	1193.2	1181.9	1160.5	1150.6	1143.5
35°	1144.9	1132.1	1108.0	1098.0	1093.8
37.5°	1092.4	1079.6	1058.3	1049.7	1041.2
40°	1041.2	1029.9	1005.7	992.9	990.1
42.5°	987.2	975.9	954.6	940.4	931.8
45°	931.8	921.9	899.2	885.0	876.4
47.5°	877.9	866.5	846.6	829.6	818.2
50°	822.5	811.1	789.8	769.9	765.6
52.5°	761.4	754.3	733.0	714.5	708.8
55°	703.1	697.5	679.0	660.5	653.4
57.5°	647.7	640.6	619.3	605.1	596.6
60°	586.7	582.4	563.9	548.3	542.6
62.5°	529.8	524.2	508.5	492.9	485.8
65°	474.4	467.3	451.7	437.5	431.8
67.5°	417.6	410.5	397.7	386.4	380.7
70°	360.8	355.1	342.3	332.4	325.3
72.5°	305.4	299.7	288.4	278.4	277.0
75°	248.6	247.2	238.6	230.1	227.3
77.5°	196.0	194.6	188.9	184.7	181.8
80°	144.9	144.9	140.6	136.4	134.9
82.5°	99.4	100.9	96.6	93.8	93.8
85°	62.5	59.7	55.4	52.6	51.1
87.5°	25.6	21.3	19.9	15.6	14.2
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	23.03	24.64	23.39	24.95	25.26	22.60	24.21	22.96	24.52	24.84
	3H	24.78	26.23	25.16	26.56	26.92	24.30	25.75	24.68	26.08	26.44
	4H	25.43	26.79	25.82	27.14	27.52	24.92	26.29	25.32	26.64	27.02
	6H	25.88	27.15	26.29	27.52	27.91	25.39	26.65	25.80	27.02	27.41
	8H	26.02	27.23	26.45	27.62	28.02	25.53	26.74	25.95	27.13	27.52
	12H	26.11	27.27	26.54	27.65	28.08	25.61	26.77	26.04	27.15	27.58
4H	2H	23.59	24.95	23.98	25.30	25.68	23.24	24.61	23.64	24.96	25.34
	3H	25.56	26.71	25.97	27.10	27.50	25.16	26.31	25.57	26.70	27.10
	4H	26.34	27.38	26.77	27.79	28.23	25.91	26.94	26.34	27.36	27.79
	6H	26.93	27.83	27.38	28.27	28.73	26.49	27.40	26.95	27.84	28.29
	8H	27.11	27.96	27.57	28.40	28.86	26.67	27.52	27.14	27.96	28.43
	12H	27.25	28.01	27.73	28.48	28.95	26.79	27.55	27.27	28.03	28.50
8H	4H	26.61	27.46	27.07	27.90	28.37	26.23	27.08	26.69	27.52	27.98
	6H	27.31	28.02	27.81	28.50	28.98	26.93	27.63	27.42	28.12	28.59
	8H	27.57	28.20	28.08	28.70	29.19	27.18	27.81	27.69	28.31	28.80
	12H	27.77	28.33	28.28	28.82	29.38	27.35	27.91	27.86	28.40	28.96
12H	4H	26.64	27.40	27.12	27.87	28.34	26.26	27.02	26.74	27.50	27.97
	6H	27.35	27.99	27.86	28.49	28.98	26.98	27.61	27.49	28.12	28.61
	8H	27.66	28.22	28.17	28.71	29.27	27.29	27.84	27.79	28.33	28.89