

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: P243143

Luminaire Tested: S122DRP-H1005D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P243143
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-H1005D940-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER.
HIGH PERFORMANCE LIGHT ENGINE
Light Source: (184) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

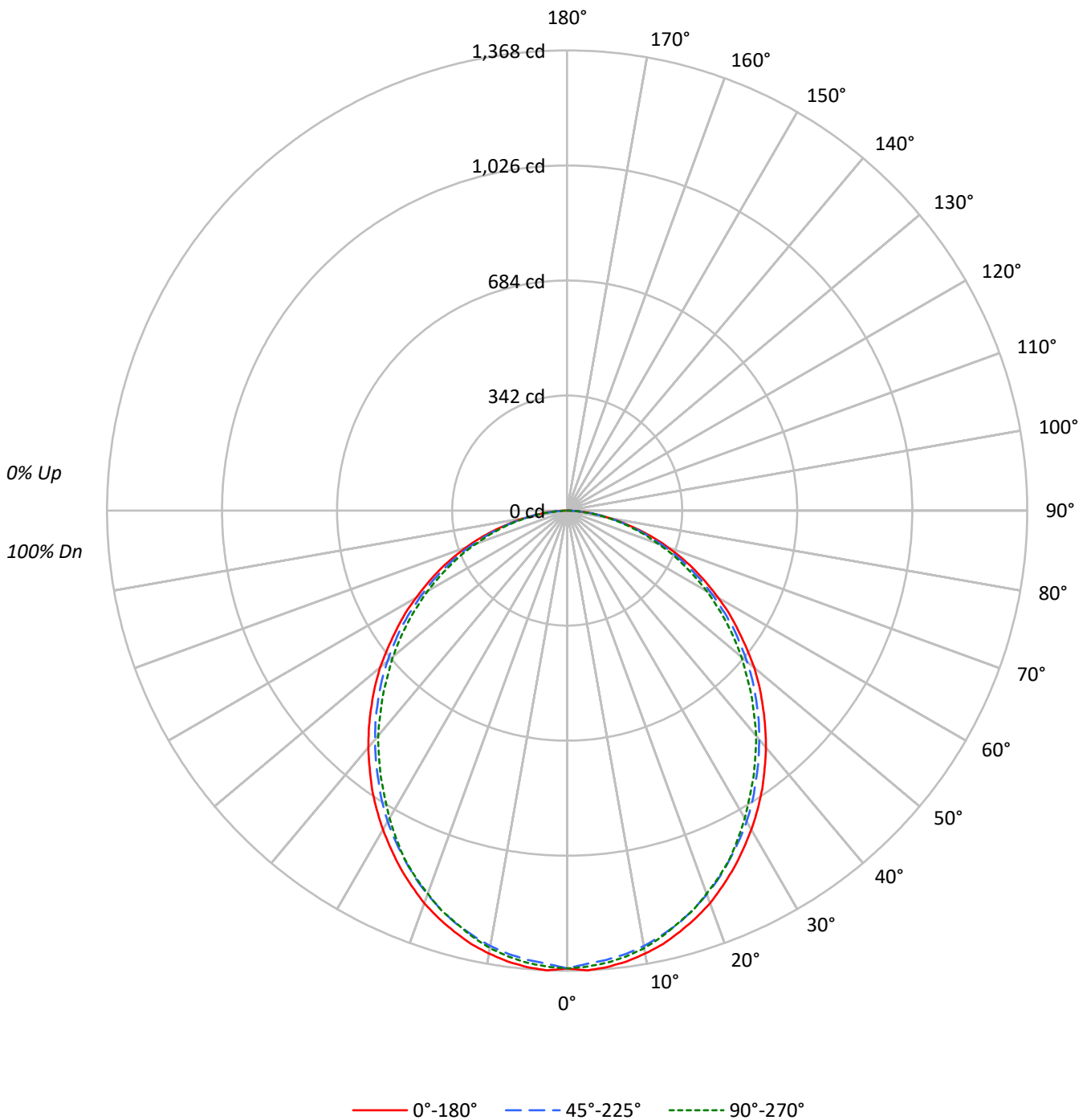
Lumens per Lamp: N/A
Luminaire Lumens: 3463.0 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P243143

CATALOG NUMBER: S122DRP-H1005D940-X4F0-XX-UDD-F-W

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	50	30	10	0	
RCR																						
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100				100
1	109	104	100	96	106	102	98	95	98	95	92	94	91	89	90	88	86	84				84
2	99	91	85	79	97	89	83	78	86	81	76	83	78	74	80	76	73	71				71
3	91	80	72	66	88	79	71	65	76	69	64	73	68	63	71	66	62	60				60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51				51
5	77	64	55	49	75	63	55	48	61	53	48	59	52	47	57	51	47	45				45
6	71	58	49	43	69	57	48	42	55	48	42	53	47	42	52	46	41	39				39
7	66	52	44	38	64	52	43	38	50	43	37	49	42	37	47	41	37	35				35
8	61	48	40	34	60	47	39	34	46	39	33	45	38	33	44	38	33	31				31
9	57	44	36	30	56	43	36	30	42	35	30	41	35	30	40	34	30	28				28
10	54	41	33	28	53	40	33	28	39	32	28	38	32	27	37	32	27	26				26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25922	25922	25922
5°	26046	25637	25805
10°	25862	25424	25546
15°	25551	25081	25056
20°	25171	24612	24561
25°	24649	24041	24016
30°	24084	23477	23228
35°	23509	22751	22458
40°	22861	22080	21737
45°	22164	21388	20847
50°	21519	20666	20035
55°	20619	19912	19161
60°	19733	18972	18252
65°	18880	17979	17185
70°	17743	16836	15995
75°	16154	15506	14770
80°	14030	13624	13075
85°	12064	10687	9878

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 22164 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.1	3.7
10°-20°	360.7	10.4
20°-30°	530.3	15.3
30°-40°	615.8	17.8
40°-50°	614.9	17.8
50°-60°	535.6	15.5
60°-70°	396.1	11.4
70°-80°	223.3	6.4
80°-90°	58.2	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°	1019.1	29.4
0°-40°	1634.9	47.2
0°-60°	2785.4	80.4
0°-90°	3463.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3463.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1361	1361	1361	1361	1361	
5°	1362	1356	1341	1352	1350	129
15°	1296	1289	1272	1277	1271	365
25°	1173	1163	1144	1143	1143	540
35°	1011	1000	978	970	966	632
45°	823	814	794	781	774	635
55°	621	616	600	583	577	556
65°	419	413	399	386	381	414
75°	220	218	211	203	201	233
85°	55	53	49	46	45	62
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1360.9	1360.9	1360.9	1360.9	1360.9
2.5°	1368.4	1362.2	1348.4	1359.7	1357.1
5°	1362.2	1355.9	1340.8	1352.1	1349.6
7.5°	1352.1	1345.9	1329.6	1340.8	1337.1
10°	1337.1	1329.6	1314.5	1322.0	1320.8
12.5°	1319.5	1312.0	1294.4	1300.7	1298.2
15°	1295.7	1289.4	1271.9	1276.9	1270.6
17.5°	1270.6	1260.6	1244.3	1249.3	1245.5
20°	1241.8	1231.7	1214.2	1216.7	1211.7
22.5°	1207.9	1197.9	1181.5	1181.5	1179.0
25°	1172.8	1162.7	1143.9	1142.7	1142.7
27.5°	1133.9	1125.1	1106.3	1102.5	1100.0
30°	1095.0	1087.5	1067.4	1059.9	1056.1
32.5°	1053.6	1043.6	1024.8	1016.0	1009.7
35°	1011.0	999.7	978.4	969.6	965.8
37.5°	964.6	953.3	934.5	926.9	919.4
40°	919.4	909.4	888.0	876.8	874.2
42.5°	871.7	861.7	842.9	830.3	822.8
45°	822.8	814.0	794.0	781.4	773.9
47.5°	775.2	765.1	747.6	732.5	722.5
50°	726.2	716.2	697.4	679.8	676.1
52.5°	672.3	666.0	647.2	630.9	625.9
55°	620.9	615.9	599.6	583.2	577.0
57.5°	572.0	565.7	546.9	534.3	526.8
60°	518.0	514.3	498.0	484.2	479.1
62.5°	467.9	462.8	449.0	435.2	429.0
65°	418.9	412.7	398.9	386.3	381.3
67.5°	368.8	362.5	351.2	341.2	336.2
70°	318.6	313.6	302.3	293.5	287.2
72.5°	269.7	264.7	254.6	245.8	244.6
75°	219.5	218.2	210.7	203.2	200.7
77.5°	173.1	171.8	166.8	163.1	160.5
80°	127.9	127.9	124.2	120.4	119.2
82.5°	87.8	89.1	85.3	82.8	82.8
85°	55.2	52.7	48.9	46.4	45.2
87.5°	22.6	18.8	17.6	13.8	12.5
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	22.59	24.20	22.96	24.52	24.83	22.16	23.78	22.53	24.09	24.40
	3H	24.35	25.80	24.72	26.13	26.49	23.87	25.32	24.24	25.65	26.01
	4H	24.99	26.36	25.39	26.71	27.09	24.49	25.86	24.89	26.21	26.58
	6H	25.45	26.72	25.86	27.08	27.47	24.95	26.22	25.36	26.59	26.98
	8H	25.59	26.80	26.01	27.19	27.59	25.09	26.30	25.52	26.69	27.09
	12H	25.68	26.84	26.11	27.22	27.65	25.17	26.33	25.60	26.71	27.14
4H	2H	23.15	24.52	23.55	24.87	25.25	22.81	24.18	23.21	24.53	24.90
	3H	25.13	26.27	25.54	26.67	27.07	24.73	25.87	25.14	26.27	26.67
	4H	25.91	26.94	26.34	27.36	27.79	25.48	26.51	25.91	26.93	27.36
	6H	26.49	27.40	26.95	27.84	28.30	26.06	26.96	26.51	27.40	27.86
	8H	26.68	27.52	27.14	27.97	28.43	26.24	27.09	26.70	27.53	28.00
	12H	26.81	27.57	27.29	28.05	28.52	26.36	27.12	26.84	27.59	28.06
8H	4H	26.18	27.03	26.64	27.47	27.93	25.80	26.64	26.26	27.09	27.55
	6H	26.88	27.58	27.37	28.07	28.55	26.49	27.20	26.99	27.68	28.16
	8H	27.14	27.77	27.65	28.27	28.76	26.74	27.37	27.25	27.88	28.37
	12H	27.34	27.90	27.85	28.39	28.95	26.92	27.48	27.43	27.97	28.53
12H	4H	26.20	26.96	26.68	27.44	27.91	25.83	26.59	26.31	27.07	27.54
	6H	26.92	27.55	27.43	28.06	28.55	26.55	27.18	27.06	27.69	28.17
	8H	27.23	27.79	27.74	28.28	28.84	26.85	27.41	27.36	27.90	28.46