

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: P242283

Luminaire Tested: S122DRP-S1005D940-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242283
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-10)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S122DRP-S1005D940-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

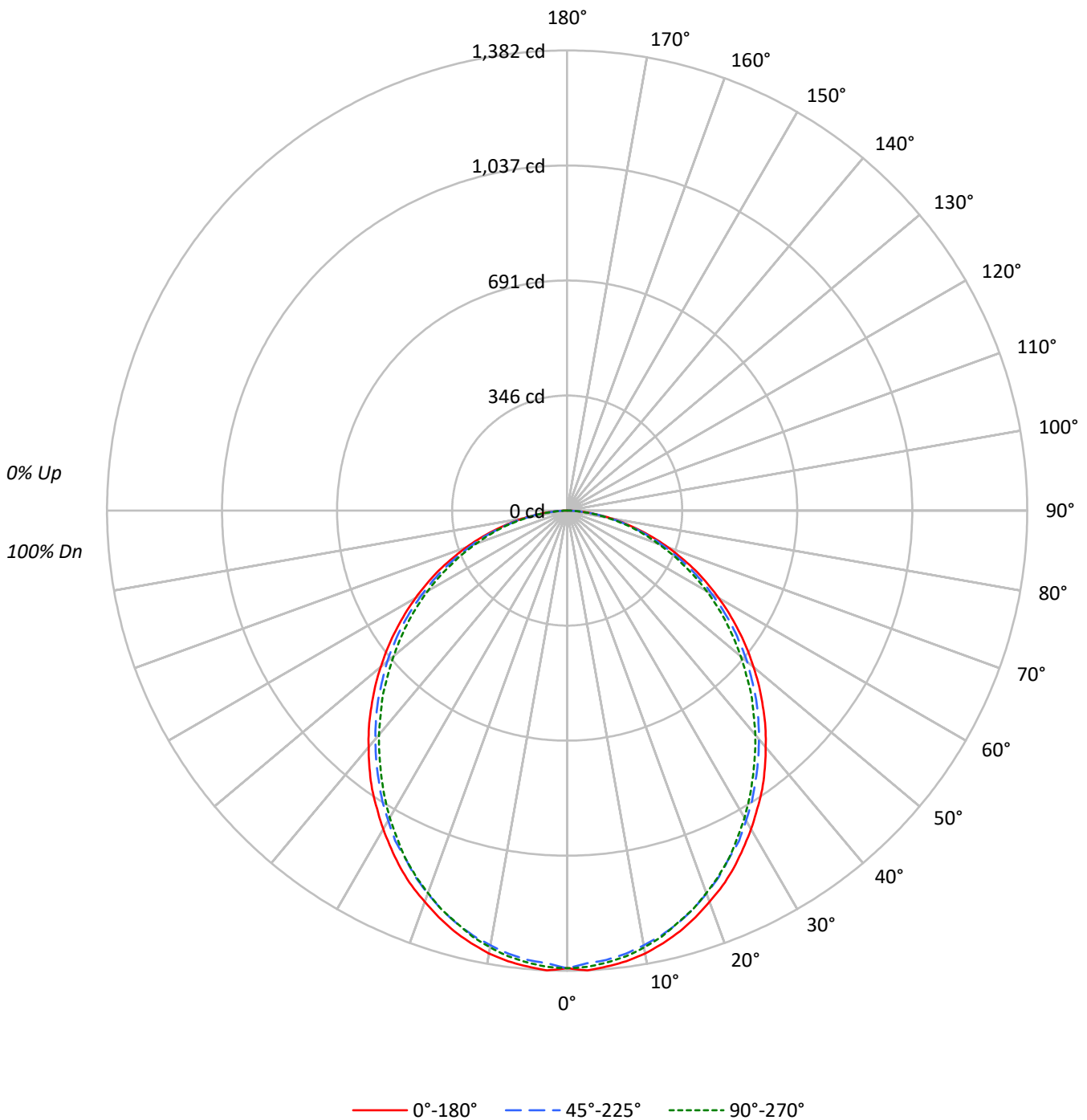
Lumens per Lamp: N/A
Luminaire Lumens: 3496.8 lumens
Efficiency: N/A
Efficacy: 85.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
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	27	38	32	27	37	32	27	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	26179	26179	26179
5°	26279	25901	26054
10°	26125	25639	25767
15°	25801	25306	25279
20°	25342	24807	24780
25°	24886	24192	24192
30°	24299	23631	23428
35°	23755	22955	22618
40°	23070	22279	21854
45°	22393	21609	21076
50°	21656	20912	20168
55°	20892	20101	19354
60°	20038	19132	18427
65°	19119	18168	17334
70°	17961	17003	16190
75°	16338	15661	15271
80°	14501	14062	13338
85°	11845	11255	10119

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 22393 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	129.4	3.7
10°-20°	364.0	10.4
20°-30°	534.9	15.3
30°-40°	621.2	17.8
40°-50°	620.5	17.7
50°-60°	541.0	15.5
60°-70°	399.9	11.4
70°-80°	226.3	6.5
80°-90°	59.7	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°	1028.2	29.4
0°-40°	1649.4	47.2
0°-60°	2810.9	80.4
0°-90°	3496.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3496.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1374	1374	1374	1374	1374	
5°	1374	1369	1355	1365	1363	130
15°	1308	1300	1283	1288	1282	368
25°	1184	1174	1151	1154	1151	545
35°	1022	1008	987	979	973	638
45°	831	822	802	788	782	642
55°	629	621	605	589	583	562
65°	424	416	403	391	385	419
75°	222	219	213	205	208	237
85°	54	53	52	48	46	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1374.4	1374.4	1374.4	1374.4	1374.4
2.5°	1382.4	1375.8	1361.2	1374.4	1371.8
5°	1374.4	1369.2	1354.6	1365.2	1362.6
7.5°	1365.2	1357.3	1342.7	1353.3	1350.7
10°	1350.7	1341.4	1325.6	1336.1	1332.2
12.5°	1330.8	1322.9	1307.0	1313.7	1311.0
15°	1308.4	1300.4	1283.3	1288.5	1281.9
17.5°	1280.6	1272.7	1255.5	1262.1	1255.5
20°	1250.2	1242.3	1223.8	1227.8	1222.5
22.5°	1219.8	1207.9	1190.7	1190.7	1188.1
25°	1184.1	1173.6	1151.1	1153.7	1151.1
27.5°	1144.5	1135.2	1118.1	1114.1	1107.5
30°	1104.8	1094.3	1074.4	1070.5	1065.2
32.5°	1062.6	1054.6	1033.5	1025.6	1020.3
35°	1021.6	1008.4	987.2	979.3	972.7
37.5°	975.3	963.4	942.3	933.0	926.4
40°	927.8	917.2	896.0	884.1	878.9
42.5°	881.5	870.9	849.8	836.6	828.6
45°	831.3	822.0	802.2	787.7	782.4
47.5°	782.4	773.1	752.0	737.4	729.5
50°	730.8	724.2	705.7	687.2	680.6
52.5°	680.6	671.4	654.2	639.6	630.4
55°	629.1	621.1	605.3	589.4	582.8
57.5°	577.5	570.9	553.7	537.9	532.6
60°	526.0	520.7	502.2	487.7	483.7
62.5°	475.8	466.5	453.3	440.1	434.8
65°	424.2	416.3	403.1	391.2	384.6
67.5°	371.4	364.8	352.9	343.6	338.3
70°	322.5	317.2	305.3	296.0	290.7
72.5°	272.2	267.0	260.4	251.1	247.1
75°	222.0	219.4	212.8	204.8	207.5
77.5°	177.1	171.8	169.2	165.2	161.2
80°	132.2	130.8	128.2	124.2	121.6
82.5°	89.9	89.9	88.5	83.3	83.3
85°	54.2	52.9	51.5	47.6	46.3
87.5°	23.8	21.1	18.5	14.5	13.2
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	22.63	24.24	22.99	24.55	24.86	22.18	23.79	22.55	24.11	24.42
	3H	24.38	25.83	24.75	26.16	26.52	23.89	25.34	24.26	25.67	26.03
	4H	25.02	26.39	25.42	26.74	27.12	24.53	25.90	24.93	26.24	26.62
	6H	25.49	26.76	25.90	27.12	27.52	24.99	26.26	25.40	26.62	27.01
	8H	25.63	26.85	26.06	27.23	27.63	25.13	26.34	25.56	26.73	27.13
	12H	25.73	26.89	26.15	27.27	27.70	25.21	26.37	25.64	26.75	27.18
4H	2H	23.19	24.56	23.58	24.90	25.28	22.83	24.20	23.23	24.55	24.93
	3H	25.16	26.31	25.57	26.71	27.11	24.75	25.90	25.16	26.30	26.70
	4H	25.94	26.97	26.37	27.39	27.82	25.51	26.55	25.95	26.96	27.40
	6H	26.53	27.44	26.99	27.88	28.34	26.10	27.01	26.56	27.45	27.90
	8H	26.72	27.57	27.18	28.01	28.48	26.29	27.13	26.75	27.57	28.04
	12H	26.86	27.62	27.34	28.09	28.56	26.40	27.16	26.88	27.64	28.11
8H	4H	26.21	27.06	26.67	27.50	27.97	25.84	26.68	26.30	27.13	27.59
	6H	26.93	27.63	27.42	28.12	28.59	26.54	27.25	27.04	27.74	28.21
	8H	27.19	27.82	27.70	28.32	28.81	26.79	27.42	27.30	27.93	28.42
	12H	27.39	27.94	27.89	28.43	29.00	26.97	27.53	27.48	28.02	28.58
12H	4H	26.24	27.00	26.72	27.47	27.94	25.87	26.63	26.35	27.11	27.58
	6H	26.97	27.60	27.48	28.11	28.60	26.60	27.23	27.11	27.74	28.23
	8H	27.29	27.84	27.79	28.33	28.89	26.91	27.46	27.41	27.96	28.52