

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: P242259

Luminaire Tested: S122DRP-S1005D830-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242259
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-S1005D830-X4F0-XX-UDD-F-W
Description: DEFINE 2 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

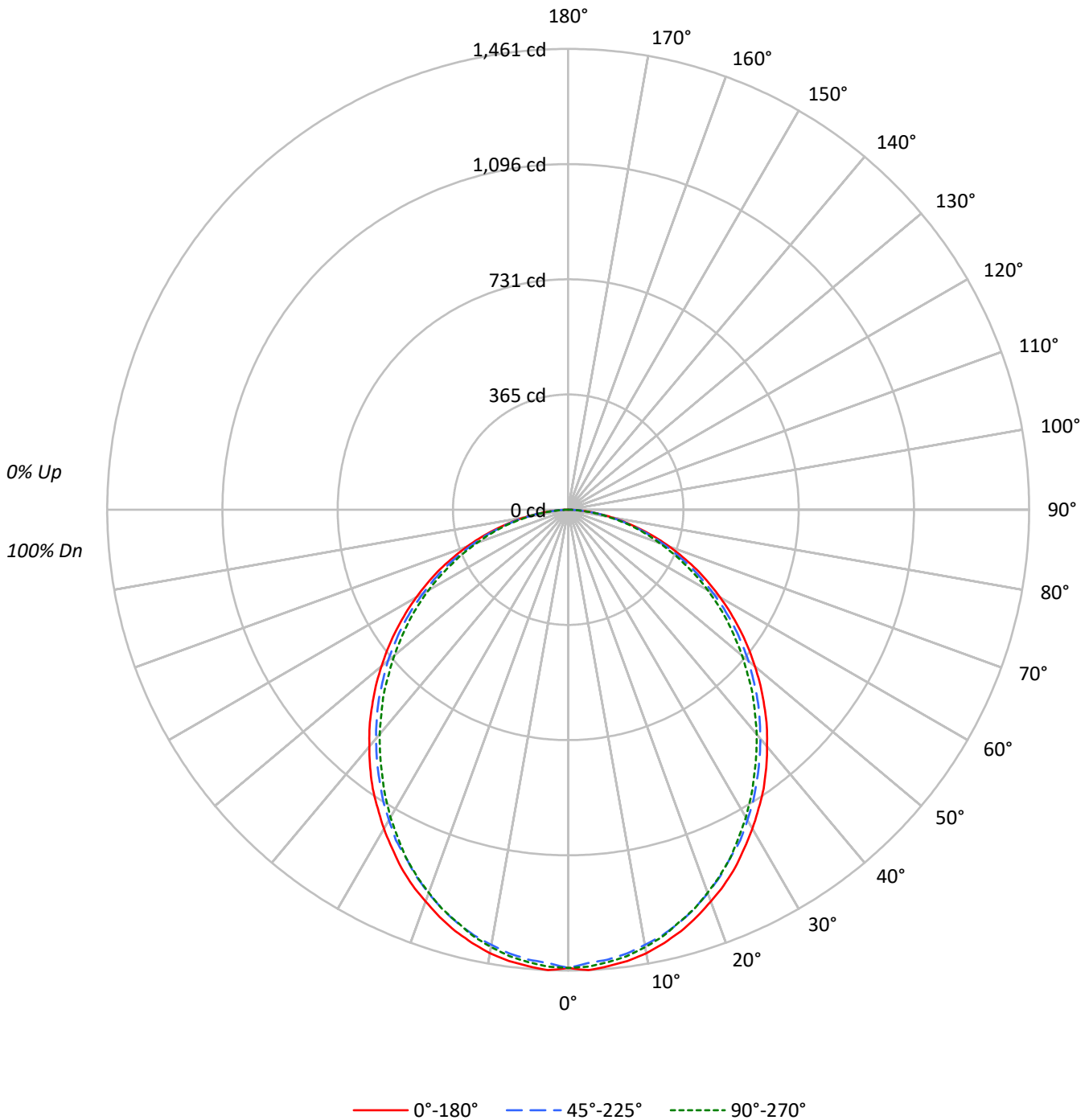
Lumens per Lamp: N/A
Luminaire Lumens: 3696.2 lumens
Efficiency: N/A
Efficacy: 89.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 0.15' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 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									
RC	80									70									30									10									0
RW	70	50	30	10	70	50	30	10	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	27	38	32	27	37	32	27	26						26													

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	27673	27673	27673
5°	27778	27377	27537
10°	27614	27099	27235
15°	27272	26748	26720
20°	26787	26221	26193
25°	26305	25571	25571
30°	25685	24979	24763
35°	25109	24264	23906
40°	24383	23550	23100
45°	23670	22840	22277
50°	22891	22106	21318
55°	22080	21247	20457
60°	21181	20221	19478
65°	20210	19205	18321
70°	18980	17972	17114
75°	17273	16551	16139
80°	15324	14863	14095
85°	12523	11911	10687

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 23670 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.7	3.7
10°-20°	384.7	10.4
20°-30°	565.4	15.3
30°-40°	656.6	17.8
40°-50°	655.8	17.7
50°-60°	571.9	15.5
60°-70°	422.7	11.4
70°-80°	239.2	6.5
80°-90°	63.1	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°	1086.8	29.4
0°-40°	1743.5	47.2
0°-60°	2971.1	80.4
0°-90°	3696.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3696.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1453	1453	1453	1453	1453	
5°	1453	1447	1432	1443	1440	138
15°	1383	1375	1356	1362	1355	390
25°	1252	1240	1217	1220	1217	576
35°	1080	1066	1044	1035	1028	674
45°	879	869	848	833	827	678
55°	665	657	640	623	616	595
65°	448	440	426	414	406	443
75°	235	232	225	216	219	250
85°	57	56	54	50	49	67
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1452.8	1452.8	1452.8	1452.8	1452.8
2.5°	1461.2	1454.2	1438.8	1452.8	1450.0
5°	1452.8	1447.2	1431.8	1443.0	1440.2
7.5°	1443.0	1434.6	1419.3	1430.4	1427.7
10°	1427.7	1417.9	1401.1	1412.3	1408.1
12.5°	1406.7	1398.3	1381.6	1388.5	1385.7
15°	1383.0	1374.6	1356.4	1362.0	1355.0
17.5°	1353.6	1345.2	1327.1	1334.1	1327.1
20°	1321.5	1313.1	1293.6	1297.7	1292.2
22.5°	1289.4	1276.8	1258.6	1258.6	1255.8
25°	1251.6	1240.5	1216.7	1219.5	1216.7
27.5°	1209.7	1200.0	1181.8	1177.6	1170.6
30°	1167.8	1156.7	1135.7	1131.5	1125.9
32.5°	1123.1	1114.7	1092.4	1084.0	1078.4
35°	1079.8	1065.9	1043.5	1035.1	1028.1
37.5°	1030.9	1018.4	996.0	986.2	979.2
40°	980.6	969.5	947.1	934.5	929.0
42.5°	931.7	920.6	898.2	884.3	875.9
45°	878.7	868.9	847.9	832.6	827.0
47.5°	827.0	817.2	794.8	779.5	771.1
50°	772.5	765.5	746.0	726.4	719.4
52.5°	719.4	709.6	691.5	676.1	666.3
55°	664.9	656.6	639.8	623.0	616.0
57.5°	610.5	603.5	585.3	568.5	563.0
60°	556.0	550.4	530.8	515.5	511.3
62.5°	502.9	493.1	479.1	465.2	459.6
65°	448.4	440.0	426.1	413.5	406.5
67.5°	392.5	385.6	373.0	363.2	357.6
70°	340.8	335.3	322.7	312.9	307.3
72.5°	287.8	282.2	275.2	265.4	261.2
75°	234.7	231.9	224.9	216.5	219.3
77.5°	187.2	181.6	178.8	174.6	170.4
80°	139.7	138.3	135.5	131.3	128.5
82.5°	95.0	95.0	93.6	88.0	88.0
85°	57.3	55.9	54.5	50.3	48.9
87.5°	25.1	22.4	19.6	15.4	14.0
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	22.82	24.43	23.18	24.74	25.06	22.37	23.99	22.74	24.30	24.61
	3H	24.57	26.02	24.95	26.35	26.71	24.08	25.53	24.45	25.86	26.22
	4H	25.22	26.58	25.61	26.93	27.31	24.72	26.09	25.12	26.44	26.81
	6H	25.68	26.95	26.10	27.32	27.71	25.18	26.45	25.59	26.82	27.21
	8H	25.83	27.04	26.25	27.43	27.83	25.32	26.53	25.75	26.92	27.32
	12H	25.92	27.08	26.35	27.46	27.89	25.40	26.56	25.83	26.95	27.38
4H	2H	23.38	24.75	23.78	25.10	25.47	23.03	24.40	23.42	24.74	25.12
	3H	25.35	26.50	25.76	26.90	27.30	24.95	26.09	25.36	26.49	26.89
	4H	26.13	27.17	26.56	27.58	28.02	25.71	26.74	26.14	27.16	27.59
	6H	26.73	27.63	27.18	28.07	28.53	26.29	27.20	26.75	27.64	28.10
	8H	26.92	27.76	27.38	28.21	28.67	26.48	27.32	26.94	27.77	28.23
	12H	27.05	27.81	27.53	28.28	28.75	26.60	27.36	27.08	27.83	28.30
8H	4H	26.40	27.25	26.87	27.69	28.16	26.03	26.88	26.49	27.32	27.78
	6H	27.12	27.82	27.61	28.31	28.79	26.74	27.44	27.23	27.93	28.40
	8H	27.38	28.01	27.89	28.52	29.00	26.99	27.62	27.50	28.12	28.61
	12H	27.58	28.14	28.09	28.63	29.19	27.16	27.72	27.67	28.21	28.77
12H	4H	26.43	27.19	26.91	27.67	28.14	26.07	26.83	26.55	27.30	27.77
	6H	27.16	27.80	27.67	28.30	28.79	26.79	27.43	27.30	27.93	28.42
	8H	27.48	28.04	27.98	28.53	29.09	27.10	27.66	27.61	28.15	28.71