

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: P242598

Luminaire Tested: S124DRP-S1195D927-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242598
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-5)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S124DRP-S1195D927-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 2700K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

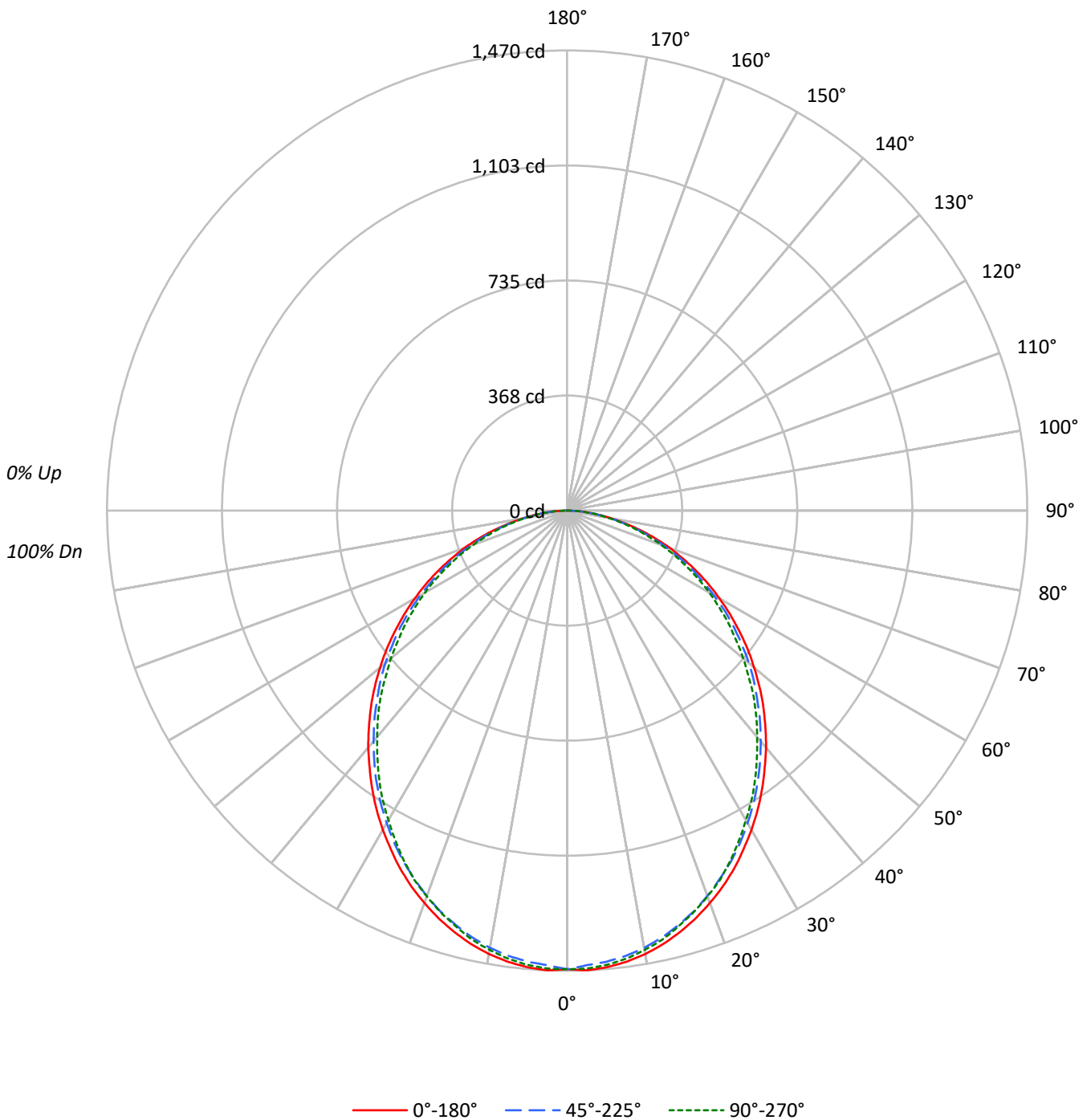
Lumens per Lamp: N/A
Luminaire Lumens: 3760.8 lumens
Efficiency: N/A
Efficacy: 91.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P242598

CATALOG NUMBER: S124DRP-S1195D927-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	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	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70					70			
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60					60			
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51					51			
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44					44			
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39					39			
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35					35			
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	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	52	40	33	28	39	32	27	38	32	27	37	31	27	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	13024	13024	13024
5°	13064	12907	13001
10°	12981	12802	12865
15°	12825	12619	12652
20°	12617	12395	12405
25°	12378	12137	12103
30°	12087	11833	11726
35°	11785	11518	11365
40°	11471	11158	10954
45°	11143	10803	10597
50°	10781	10489	10164
55°	10389	10079	9752
60°	9998	9621	9330
65°	9557	9187	8815
70°	9063	8605	8270
75°	8308	7903	7700
80°	7392	7090	6911
85°	6466	6232	6109

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 11143 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	138.1	3.7
10°-20°	389.1	10.3
20°-30°	572.6	15.2
30°-40°	665.6	17.7
40°-50°	665.6	17.7
50°-60°	582.1	15.5
60°-70°	432.2	11.5
70°-80°	245.2	6.5
80°-90°	70.2	1.9
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°	1099.8	29.2
0°-40°	1765.5	46.9
0°-60°	3013.2	80.1
0°-90°	3760.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3760.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1465	1465	1465	1465	1465	
5°	1464	1459	1446	1459	1457	139
15°	1394	1389	1371	1378	1375	393
25°	1262	1254	1238	1239	1234	581
35°	1086	1078	1061	1053	1047	679
45°	886	878	859	846	843	683
55°	670	667	650	636	629	601
65°	454	448	437	425	419	450
75°	242	236	230	225	224	257
85°	63	63	61	61	60	72
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1465.2	1465.2	1465.2	1465.2	1465.2
2.5°	1469.9	1466.4	1453.5	1465.2	1464.1
5°	1464.1	1459.4	1446.5	1459.4	1457.0
7.5°	1453.5	1448.8	1434.7	1445.3	1444.1
10°	1438.2	1433.5	1418.3	1427.7	1425.3
12.5°	1418.3	1413.6	1397.2	1407.7	1404.2
15°	1393.6	1388.9	1371.3	1378.4	1374.8
17.5°	1365.5	1359.6	1343.1	1347.8	1345.5
20°	1333.8	1327.9	1310.3	1313.8	1311.4
22.5°	1299.7	1291.5	1273.9	1280.9	1276.2
25°	1262.1	1253.9	1237.5	1238.7	1234.0
27.5°	1219.9	1211.6	1196.4	1194.0	1188.2
30°	1177.6	1168.2	1152.9	1148.2	1142.4
32.5°	1133.0	1124.8	1108.3	1102.5	1096.6
35°	1086.0	1077.8	1061.4	1053.1	1047.3
37.5°	1036.7	1029.7	1012.1	1003.8	995.6
40°	988.6	979.2	961.6	949.8	944.0
42.5°	936.9	932.2	912.3	898.2	894.6
45°	886.4	878.2	859.4	846.5	843.0
47.5°	833.6	827.7	810.1	796.0	786.6
50°	779.6	774.9	758.5	742.0	735.0
52.5°	726.8	720.9	703.3	689.2	679.8
55°	670.4	666.9	650.4	636.3	629.3
57.5°	617.6	614.0	597.6	583.5	576.5
60°	562.4	556.5	541.2	530.7	524.8
62.5°	508.4	503.7	487.2	477.8	472.0
65°	454.4	448.5	436.8	425.0	419.1
67.5°	399.2	394.5	382.7	371.0	369.8
70°	348.7	340.5	331.1	321.7	318.2
72.5°	294.7	286.5	279.4	272.4	268.9
75°	241.9	236.0	230.1	225.4	224.2
77.5°	190.2	187.9	182.0	180.8	177.3
80°	144.4	140.9	138.5	136.2	135.0
82.5°	99.8	98.6	98.6	97.4	96.3
85°	63.4	63.4	61.1	61.1	59.9
87.5°	30.5	29.4	28.2	28.2	28.2
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	20.22	21.83	20.58	22.14	22.46	19.84	21.46	20.21	21.77	22.08
	3H	21.98	23.44	22.35	23.76	24.12	21.55	23.01	21.93	23.34	23.70
	4H	22.63	24.00	23.03	24.35	24.73	22.20	23.57	22.60	23.92	24.29
	6H	23.11	24.38	23.52	24.74	25.13	22.67	23.95	23.08	24.31	24.70
	8H	23.26	24.47	23.68	24.86	25.26	22.83	24.05	23.26	24.43	24.83
	12H	23.36	24.53	23.79	24.91	25.34	22.94	24.10	23.37	24.49	24.91
4H	2H	20.79	22.16	21.19	22.51	22.88	20.49	21.86	20.89	22.21	22.59
	3H	22.77	23.92	23.18	24.32	24.72	22.42	23.57	22.83	23.97	24.37
	4H	23.55	24.59	23.98	25.00	25.44	23.19	24.23	23.62	24.64	25.08
	6H	24.15	25.06	24.61	25.50	25.96	23.79	24.70	24.24	25.14	25.59
	8H	24.35	25.20	24.81	25.64	26.11	23.99	24.84	24.45	25.29	25.75
	12H	24.50	25.27	24.98	25.74	26.21	24.15	24.91	24.63	25.39	25.86
8H	4H	23.83	24.68	24.29	25.12	25.58	23.50	24.36	23.97	24.80	25.26
	6H	24.55	25.26	25.04	25.74	26.22	24.23	24.94	24.72	25.42	25.90
	8H	24.82	25.45	25.33	25.96	26.45	24.51	25.14	25.02	25.65	26.14
	12H	25.05	25.61	25.55	26.10	26.66	24.74	25.30	25.25	25.79	26.35
12H	4H	23.85	24.62	24.33	25.09	25.56	23.54	24.30	24.02	24.78	25.25
	6H	24.60	25.23	25.11	25.74	26.23	24.29	24.92	24.80	25.43	25.92
	8H	24.93	25.49	25.43	25.98	26.54	24.63	25.19	25.14	25.68	26.24