

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: P242612

Luminaire Tested: S124DRP-S1195D840-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242612
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-S1195D840-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 4000K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

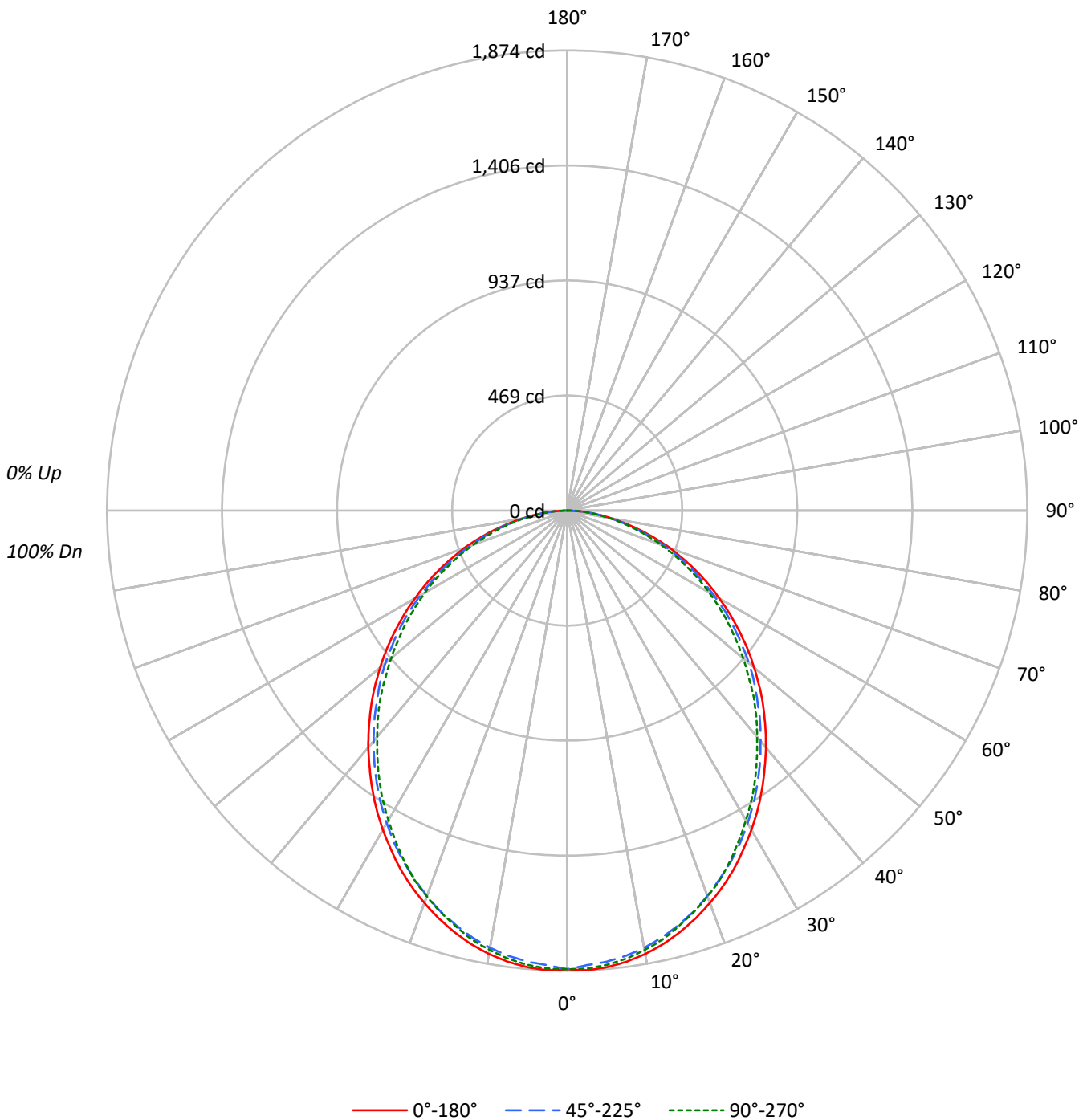
Lumens per Lamp: N/A
Luminaire Lumens: 4794.3 lumens
Efficiency: N/A
Efficacy: 116.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (A_{in}): 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	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°	16604	16604	16604
5°	16654	16453	16573
10°	16549	16319	16400
15°	16349	16087	16128
20°	16084	15800	15814
25°	15781	15472	15428
30°	15408	15086	14948
35°	15023	14682	14488
40°	14623	14224	13963
45°	14205	13773	13509
50°	13743	13371	12956
55°	13244	12850	12432
60°	12745	12267	11893
65°	12182	11711	11238
70°	11552	10970	10541
75°	10588	10077	9819
80°	9424	9040	8810
85°	8241	7935	7782

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14205 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	176.1	3.7
10°-20°	496.0	10.3
20°-30°	730.0	15.2
30°-40°	848.6	17.7
40°-50°	848.5	17.7
50°-60°	742.1	15.5
60°-70°	551.0	11.5
70°-80°	312.6	6.5
80°-90°	89.5	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°	1402.0	29.2
0°-40°	2250.6	46.9
0°-60°	3841.2	80.1
0°-90°	4794.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4794.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1868	1868	1868	1868	1868	
5°	1866	1860	1844	1860	1857	177
15°	1777	1771	1748	1757	1753	501
25°	1609	1598	1578	1579	1573	740
35°	1384	1374	1353	1342	1335	866
45°	1130	1120	1096	1079	1075	871
55°	855	850	829	811	802	766
65°	579	572	557	542	534	573
75°	308	301	293	287	286	327
85°	81	81	78	78	76	92
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1867.9	1867.9	1867.9	1867.9	1867.9
2.5°	1873.9	1869.4	1852.9	1867.9	1866.4
5°	1866.4	1860.4	1843.9	1860.4	1857.4
7.5°	1852.9	1846.9	1829.0	1842.4	1840.9
10°	1833.5	1827.5	1808.0	1820.0	1817.0
12.5°	1808.0	1802.0	1781.1	1794.5	1790.1
15°	1776.6	1770.6	1748.1	1757.1	1752.6
17.5°	1740.7	1733.2	1712.2	1718.2	1715.2
20°	1700.3	1692.8	1670.3	1674.8	1671.8
22.5°	1656.8	1646.4	1623.9	1632.9	1626.9
25°	1609.0	1598.5	1577.5	1579.0	1573.0
27.5°	1555.1	1544.6	1525.1	1522.1	1514.7
30°	1501.2	1489.2	1469.8	1463.8	1456.3
32.5°	1444.3	1433.8	1412.9	1405.4	1397.9
35°	1384.4	1374.0	1353.0	1342.5	1335.1
37.5°	1321.6	1312.6	1290.2	1279.7	1269.2
40°	1260.2	1248.2	1225.8	1210.8	1203.3
42.5°	1194.4	1188.4	1162.9	1145.0	1140.5
45°	1130.0	1119.5	1095.6	1079.1	1074.6
47.5°	1062.7	1055.2	1032.7	1014.8	1002.8
50°	993.8	987.8	966.9	945.9	936.9
52.5°	926.5	919.0	896.5	878.6	866.6
55°	854.6	850.1	829.2	811.2	802.2
57.5°	787.3	782.8	761.8	743.9	734.9
60°	716.9	709.4	690.0	676.5	669.0
62.5°	648.1	642.1	621.1	609.2	601.7
65°	579.2	571.7	556.8	541.8	534.3
67.5°	508.9	502.9	487.9	473.0	471.5
70°	444.5	434.0	422.1	410.1	405.6
72.5°	375.7	365.2	356.2	347.2	342.7
75°	308.3	300.8	293.4	287.4	285.9
77.5°	242.5	239.5	232.0	230.5	226.0
80°	184.1	179.6	176.6	173.6	172.1
82.5°	127.2	125.7	125.7	124.2	122.7
85°	80.8	80.8	77.8	77.8	76.3
87.5°	38.9	37.4	35.9	35.9	35.9
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	21.06	22.67	21.43	22.99	23.30	20.69	22.30	21.05	22.61	22.93
	3H	22.82	24.28	23.20	24.61	24.97	22.40	23.85	22.77	24.18	24.54
	4H	23.48	24.85	23.87	25.20	25.57	23.04	24.41	23.44	24.76	25.14
	6H	23.95	25.22	24.36	25.59	25.98	23.52	24.79	23.93	25.15	25.54
	8H	24.10	25.32	24.52	25.70	26.10	23.67	24.89	24.10	25.28	25.68
	12H	24.20	25.37	24.63	25.75	26.18	23.78	24.95	24.21	25.33	25.76
4H	2H	21.63	23.00	22.03	23.35	23.73	21.33	22.71	21.73	23.05	23.43
	3H	23.61	24.76	24.02	25.16	25.56	23.26	24.41	23.67	24.81	25.21
	4H	24.39	25.43	24.82	25.85	26.28	24.03	25.07	24.46	25.48	25.92
	6H	25.00	25.91	25.45	26.35	26.80	24.63	25.54	25.09	25.98	26.44
	8H	25.20	26.05	25.66	26.49	26.95	24.84	25.69	25.30	26.13	26.60
	12H	25.35	26.11	25.83	26.59	27.06	24.99	25.76	25.47	26.23	26.70
8H	4H	24.67	25.52	25.13	25.96	26.43	24.35	25.20	24.81	25.64	26.11
	6H	25.39	26.10	25.89	26.59	27.06	25.07	25.78	25.57	26.27	26.74
	8H	25.66	26.30	26.17	26.80	27.29	25.35	25.99	25.86	26.49	26.98
	12H	25.89	26.45	26.40	26.94	27.50	25.58	26.15	26.09	26.64	27.20
12H	4H	24.70	25.46	25.18	25.94	26.41	24.38	25.15	24.86	25.62	26.09
	6H	25.44	26.08	25.95	26.58	27.07	25.13	25.77	25.64	26.27	26.76
	8H	25.77	26.33	26.28	26.82	27.38	25.47	26.03	25.98	26.52	27.09