

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: P242607

Luminaire Tested: S124DRP-S1195D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242607
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-S1195D835-X4F0-XX-UDD-F-W
Description: DEFINE 4 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

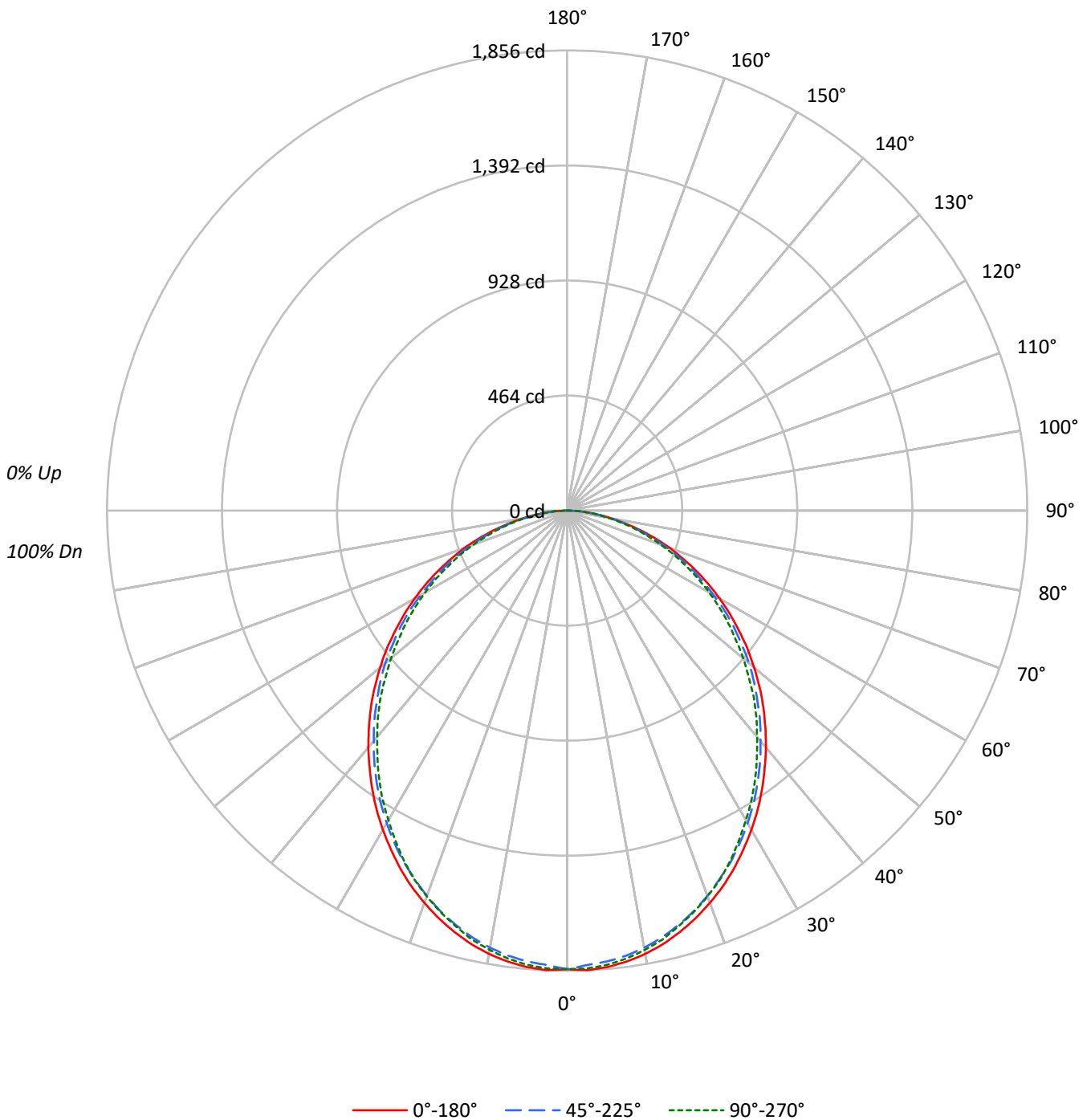
Lumens per Lamp: N/A
Luminaire Lumens: 4747.5 lumens
Efficiency: N/A
Efficacy: 115.5 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.17 / 1.29
Luminous Opening: Rectangular (W 0.31' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 41.1
Input Voltage (V): 120
Input Current (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	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	84	79	97	89	83	78	86	80	76	82	78	74	79	76	73	70
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	60
4	83	71	63	56	81	70	62	56	67	60	55	65	59	54	63	58	53	51
5	77	64	55	48	74	63	54	48	61	53	48	59	52	47	57	51	47	44
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	44	38	64	52	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	34	46	39	33	45	38	33	43	37	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	52	40	33	28	39	32	27	38	32	27	37	31	27	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16441	16441	16441
5°	16491	16292	16412
10°	16387	16160	16240
15°	16189	15930	15971
20°	15926	15646	15660
25°	15626	15321	15278
30°	15257	14938	14802
35°	14876	14539	14345
40°	14480	14085	13827
45°	14067	13638	13377
50°	13609	13240	12830
55°	13115	12725	12311
60°	12620	12146	11778
65°	12065	11595	11129
70°	11441	10861	10437
75°	10485	9977	9723
80°	9332	8953	8723
85°	8159	7863	7710

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14067 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.3	3.7
10°-20°	491.2	10.3
20°-30°	722.9	15.2
30°-40°	840.3	17.7
40°-50°	840.2	17.7
50°-60°	734.9	15.5
60°-70°	545.6	11.5
70°-80°	309.5	6.5
80°-90°	88.7	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°	1388.3	29.2
0°-40°	2228.6	46.9
0°-60°	3803.7	80.1
0°-90°	4747.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4747.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1850	1850	1850	1850	1850	
5°	1848	1842	1826	1842	1839	175
15°	1759	1753	1731	1740	1736	496
25°	1593	1583	1562	1564	1558	733
35°	1371	1360	1340	1329	1322	857
45°	1119	1109	1085	1069	1064	863
55°	846	842	821	803	794	758
65°	574	566	551	536	529	568
75°	305	298	290	285	283	324
85°	80	80	77	77	76	91
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1849.6	1849.6	1849.6	1849.6	1849.6
2.5°	1855.6	1851.1	1834.8	1849.6	1848.2
5°	1848.2	1842.2	1825.9	1842.2	1839.3
7.5°	1834.8	1828.9	1811.1	1824.4	1823.0
10°	1815.5	1809.6	1790.4	1802.2	1799.2
12.5°	1790.4	1784.4	1763.7	1777.0	1772.6
15°	1759.2	1753.3	1731.1	1740.0	1735.5
17.5°	1723.7	1716.2	1695.5	1701.4	1698.5
20°	1683.6	1676.2	1654.0	1658.4	1655.5
22.5°	1640.7	1630.3	1608.1	1616.9	1611.0
25°	1593.2	1582.9	1562.1	1563.6	1557.7
27.5°	1539.9	1529.5	1510.2	1507.3	1499.9
30°	1486.5	1474.7	1455.4	1449.5	1442.1
32.5°	1430.2	1419.8	1399.1	1391.7	1384.3
35°	1370.9	1360.5	1339.8	1329.4	1322.0
37.5°	1308.7	1299.8	1277.6	1267.2	1256.8
40°	1247.9	1236.1	1213.8	1199.0	1191.6
42.5°	1182.7	1176.8	1151.6	1133.8	1129.3
45°	1119.0	1108.6	1084.9	1068.6	1064.1
47.5°	1052.3	1044.9	1022.6	1004.9	993.0
50°	984.1	978.2	957.4	936.7	927.8
52.5°	917.4	910.0	887.8	870.0	858.1
55°	846.3	841.8	821.1	803.3	794.4
57.5°	779.6	775.1	754.4	736.6	727.7
60°	709.9	702.5	683.2	669.9	662.5
62.5°	641.7	635.8	615.1	603.2	595.8
65°	573.6	566.2	551.3	536.5	529.1
67.5°	503.9	498.0	483.2	468.3	466.9
70°	440.2	429.8	417.9	406.1	401.6
72.5°	372.0	361.6	352.7	343.8	339.4
75°	305.3	297.9	290.5	284.6	283.1
77.5°	240.1	237.1	229.7	228.2	223.8
80°	182.3	177.8	174.9	171.9	170.4
82.5°	126.0	124.5	124.5	123.0	121.5
85°	80.0	80.0	77.1	77.1	75.6
87.5°	38.5	37.1	35.6	35.6	35.6
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	21.03	22.64	21.39	22.95	23.27	20.65	22.26	21.02	22.58	22.89
	3H	22.79	24.24	23.16	24.57	24.93	22.36	23.82	22.74	24.15	24.51
	4H	23.44	24.81	23.84	25.16	25.54	23.01	24.38	23.40	24.73	25.10
	6H	23.92	25.19	24.33	25.55	25.94	23.48	24.75	23.89	25.12	25.51
	8H	24.07	25.28	24.49	25.67	26.07	23.64	24.86	24.06	25.24	25.64
	12H	24.17	25.33	24.60	25.72	26.14	23.75	24.91	24.18	25.29	25.72
4H	2H	21.60	22.97	22.00	23.32	23.69	21.30	22.67	21.70	23.02	23.40
	3H	23.58	24.73	23.99	25.12	25.52	23.23	24.38	23.64	24.77	25.17
	4H	24.36	25.40	24.79	25.81	26.25	24.00	25.04	24.43	25.45	25.89
	6H	24.96	25.87	25.42	26.31	26.77	24.60	25.51	25.05	25.95	26.40
	8H	25.16	26.01	25.62	26.45	26.92	24.80	25.65	25.26	26.10	26.56
	12H	25.31	26.08	25.79	26.55	27.02	24.96	25.72	25.44	26.20	26.67
8H	4H	24.64	25.49	25.10	25.93	26.39	24.31	25.16	24.77	25.61	26.07
	6H	25.36	26.06	25.85	26.55	27.03	25.04	25.75	25.53	26.23	26.71
	8H	25.63	26.26	26.14	26.77	27.26	25.32	25.95	25.83	26.46	26.95
	12H	25.86	26.42	26.36	26.91	27.47	25.55	26.11	26.06	26.60	27.16
12H	4H	24.66	25.43	25.14	25.90	26.37	24.35	25.11	24.83	25.59	26.06
	6H	25.41	26.04	25.92	26.55	27.03	25.10	25.73	25.61	26.24	26.73
	8H	25.73	26.30	26.24	26.79	27.35	25.44	26.00	25.94	26.49	27.05