

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: P242435

Luminaire Tested: S123DRP-S1165D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242435
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1802-639-11)
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123DRP-S1165D835-X4F0-XX-UDD-F-W
Description: DEFINE 3 DIRECT RECESSED WITH SATIN FLUSH DIFFUSER
STANDARD LIGHT ENGINE
Light Source: (92) 3500K CCT, 80 CRI LEDS
Ballast/Driver: -

Summary

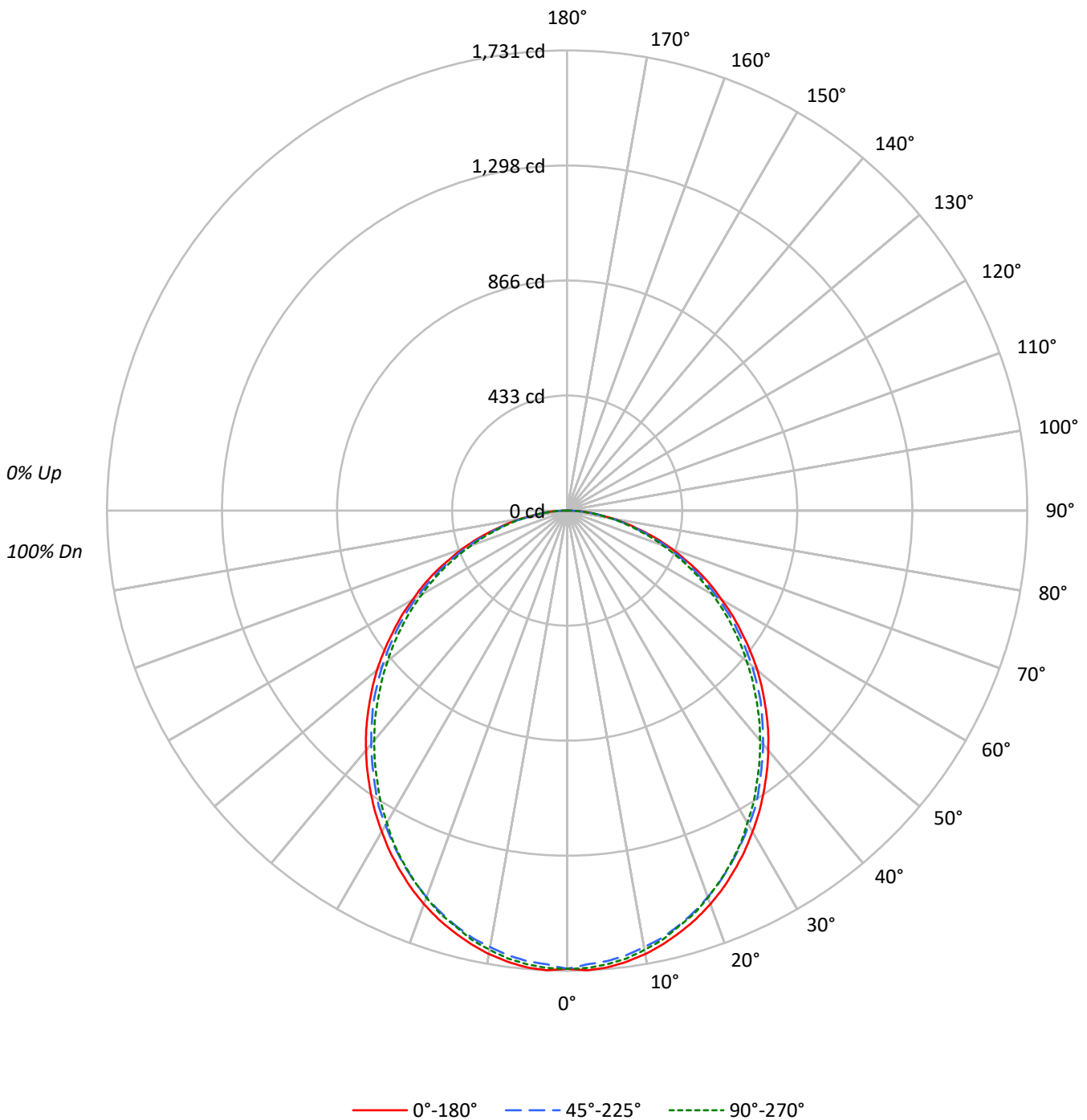
Lumens per Lamp: N/A
Luminaire Lumens: 4485.9 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

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

TEST NUMBER: P242435

CATALOG NUMBER: S123DRP-S1165D835-X4F0-XX-UDD-F-W

Luminous Intensity Polar Plot





TEST NUMBER: P242435

CATALOG NUMBER: S123DRP-S1165D835-X4F0-XX-UDD-F-W

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	94	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	72	70					70			
3	91	80	72	66	88	79	71	65	76	69	64	73	67	63	70	66	62	59					59			
4	83	71	62	56	81	70	62	55	67	60	55	65	59	54	63	58	53	51					51			
5	76	64	55	48	74	63	54	48	60	53	47	58	52	47	57	51	46	44					44			
6	71	57	49	42	69	56	48	42	55	47	42	53	46	41	51	46	41	39					39			
7	66	52	43	37	64	51	43	37	50	42	37	48	42	37	47	41	36	34					34			
8	61	48	39	33	60	47	39	33	46	38	33	44	38	33	43	37	33	31					31			
9	57	44	36	30	56	43	35	30	42	35	30	41	34	30	40	34	30	28					28			
10	54	40	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25					25			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	20893	20893	20893
5°	20990	20702	20847
10°	20850	20521	20649
15°	20606	20290	20328
20°	20321	19959	19978
25°	19941	19564	19524
30°	19519	19126	18980
35°	19080	18662	18421
40°	18621	18151	17869
45°	18114	17682	17250
50°	17607	17104	16628
55°	16944	16507	16004
60°	16276	15809	15307
65°	15686	15049	14582
70°	14810	14183	13552
75°	13535	13048	12495
80°	12209	11692	11587
85°	10723	10305	9888

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 18114 cd/sqm



TEST NUMBER: P242435

CATALOG NUMBER: S123DRP-S1165D835-X4F0-XX-UDD-F-W

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.5	3.6
10°-20°	458.8	10.2
20°-30°	677.6	15.1
30°-40°	791.4	17.6
40°-50°	795.6	17.7
50°-60°	698.9	15.6
60°-70°	520.5	11.6
70°-80°	296.2	6.6
80°-90°	84.2	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°	1299.0	29.0
0°-40°	2090.4	46.6
0°-60°	3584.9	79.9
0°-90°	4485.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4485.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1724	1724	1724	1724	1724	
5°	1725	1718	1701	1716	1713	164
15°	1642	1636	1617	1629	1620	463
25°	1491	1482	1463	1464	1460	687
35°	1289	1280	1261	1252	1245	807
45°	1057	1051	1032	1014	1006	816
55°	802	800	781	765	757	718
65°	547	540	525	513	508	540
75°	289	283	279	271	267	309
85°	77	74	74	71	71	88
90°	0	0	0	0	0	



TEST NUMBER: P242435

CATALOG NUMBER: S123DRP-S1165D835-X4F0-XX-UDD-F-W

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1723.7	1723.7	1723.7	1723.7	1723.7
2.5°	1731.1	1725.1	1708.8	1723.7	1722.2
5°	1725.1	1717.7	1701.4	1716.2	1713.3
7.5°	1711.8	1704.4	1688.1	1701.4	1699.9
10°	1694.0	1686.6	1667.3	1680.7	1677.7
12.5°	1670.3	1664.4	1646.6	1655.5	1654.0
15°	1642.1	1636.2	1616.9	1628.8	1619.9
17.5°	1611.0	1603.6	1584.3	1593.2	1590.3
20°	1575.4	1566.6	1547.3	1553.2	1548.8
22.5°	1535.4	1526.5	1507.3	1511.7	1505.8
25°	1491.0	1482.1	1462.8	1464.3	1459.8
27.5°	1445.0	1436.1	1415.4	1416.9	1412.4
30°	1394.6	1387.2	1366.5	1366.5	1356.1
32.5°	1344.2	1333.9	1319.0	1308.7	1304.2
35°	1289.4	1280.5	1261.2	1252.4	1244.9
37.5°	1234.6	1222.7	1203.4	1193.1	1188.6
40°	1176.8	1167.9	1147.1	1135.3	1129.3
42.5°	1119.0	1108.6	1087.8	1076.0	1070.1
45°	1056.7	1050.8	1031.5	1013.7	1006.3
47.5°	996.0	987.1	969.3	951.5	945.6
50°	933.7	926.3	907.0	890.7	881.8
52.5°	868.5	864.1	843.3	830.0	821.1
55°	801.8	800.3	781.1	764.8	757.3
57.5°	739.6	733.6	718.8	704.0	695.1
60°	671.4	669.9	652.1	638.8	631.4
62.5°	610.6	606.2	588.4	575.0	570.6
65°	546.9	539.5	524.7	512.8	508.4
67.5°	478.7	472.8	460.9	450.6	444.6
70°	417.9	409.1	400.2	389.8	382.4
72.5°	354.2	348.3	337.9	329.0	326.1
75°	289.0	283.1	278.6	271.2	266.8
77.5°	231.2	228.2	222.3	216.4	216.4
80°	174.9	170.4	167.5	166.0	166.0
82.5°	120.0	120.0	120.0	117.1	115.6
85°	77.1	74.1	74.1	71.1	71.1
87.5°	38.5	34.1	32.6	31.1	31.1
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P242435
 CATALOG NUMBER: S123DRP-S1165D835-X4F0-XX-UDD-F-W

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	21.92	23.54	22.28	23.85	24.16	21.60	23.22	21.97	23.54	23.85
	3H	23.69	25.15	24.06	25.48	25.84	23.32	24.78	23.70	25.11	25.47
	4H	24.35	25.72	24.74	26.07	26.45	23.96	25.33	24.35	25.68	26.06
	6H	24.83	26.11	25.24	26.47	26.87	24.44	25.72	24.85	26.08	26.48
	8H	24.99	26.21	25.41	26.59	26.99	24.60	25.82	25.03	26.21	26.61
	12H	25.09	26.26	25.52	26.64	27.07	24.71	25.88	25.14	26.26	26.69
4H	2H	22.50	23.87	22.90	24.22	24.60	22.25	23.62	22.65	23.97	24.35
	3H	24.49	25.64	24.90	26.04	26.44	24.18	25.34	24.59	25.74	26.14
	4H	25.27	26.32	25.71	26.73	27.17	24.95	25.99	25.38	26.40	26.84
	6H	25.89	26.80	26.35	27.25	27.70	25.56	26.47	26.01	26.91	27.37
	8H	26.09	26.95	26.55	27.39	27.85	25.76	26.62	26.23	27.06	27.53
	12H	26.25	27.01	26.73	27.49	27.96	25.91	26.68	26.39	27.16	27.63
8H	4H	25.56	26.41	26.02	26.86	27.32	25.27	26.12	25.73	26.56	27.03
	6H	26.30	27.01	26.79	27.49	27.97	26.00	26.71	26.50	27.20	27.68
	8H	26.57	27.21	27.08	27.71	28.20	26.28	26.92	26.79	27.43	27.91
	12H	26.80	27.36	27.30	27.85	28.41	26.51	27.07	27.01	27.56	28.12
12H	4H	25.59	26.36	26.07	26.83	27.30	25.30	26.07	25.78	26.55	27.02
	6H	26.35	26.98	26.86	27.49	27.98	26.06	26.70	26.57	27.21	27.69
	8H	26.68	27.24	27.19	27.73	28.29	26.40	26.97	26.91	27.46	28.02