

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: P242434

Luminaire Tested: S123DRP-S1000D835-X4F0-XX-UDD-F-W

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-2024
Report Number: P242434
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-S1000D835-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

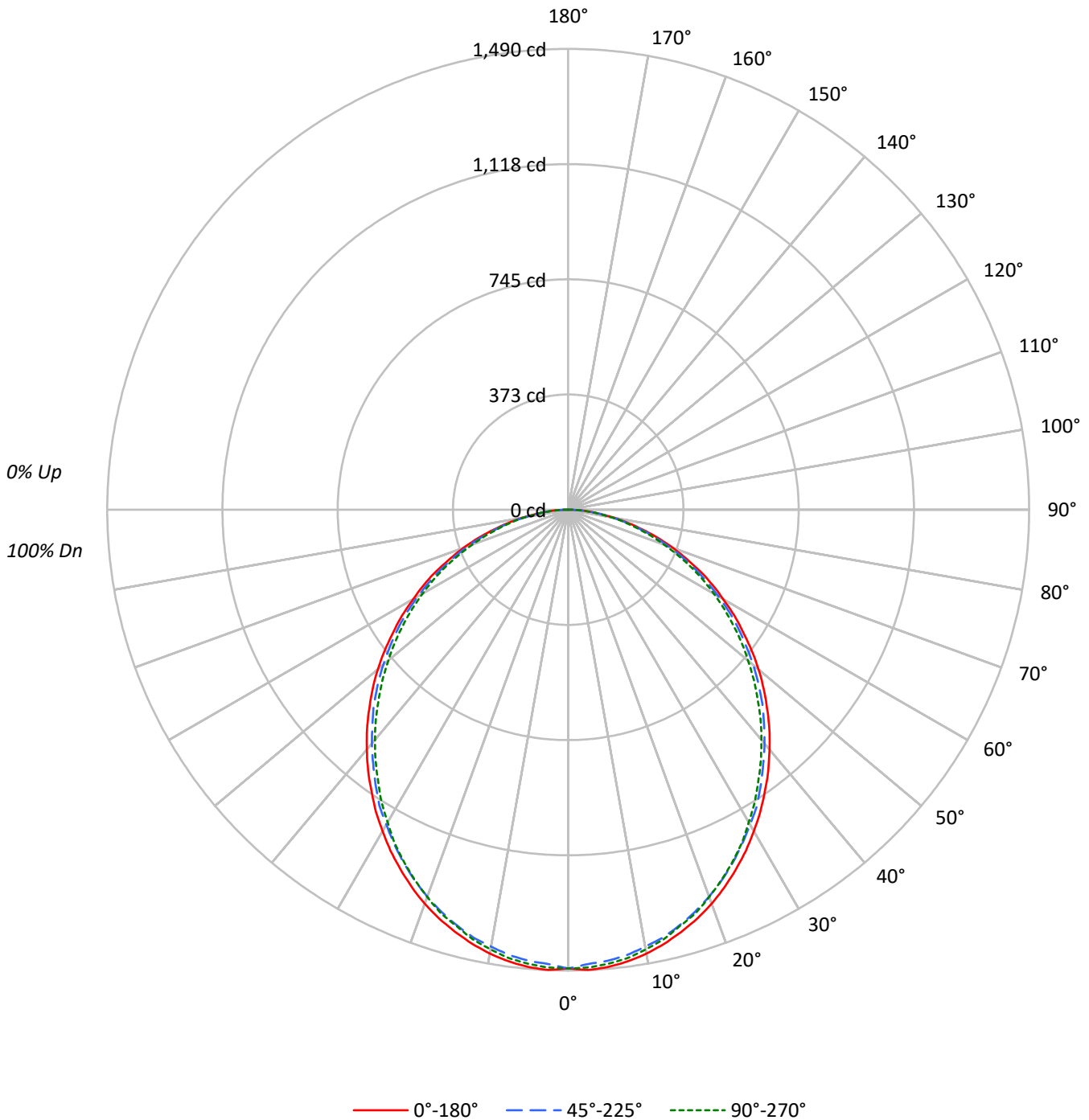
Lumens per Lamp: N/A
Luminaire Lumens: 3859.9 lumens
Efficiency: N/A
Efficacy: 110.9 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.18 / 1.3
Luminous Opening: Rectangular (W 0.23' x L: 3.88' x H: 0')
CIE Type: Direct

Input Watts (W): 34.8
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	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°	17977	17977	17977
5°	18061	17813	17937
10°	17940	17659	17768
15°	17731	17459	17491
20°	17486	17174	17189
25°	17158	16834	16799
30°	16796	16457	16331
35°	16418	16058	15851
40°	16021	15617	15375
45°	15586	15215	14843
50°	15150	14716	14309
55°	14579	14203	13772
60°	14005	13602	13171
65°	13497	12947	12545
70°	12744	12202	11660
75°	11647	11226	10748
80°	10505	10059	9968
85°	9221	8873	8511

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 15586 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.8	3.6
10°-20°	394.8	10.2
20°-30°	583.1	15.1
30°-40°	681.0	17.6
40°-50°	684.6	17.7
50°-60°	601.4	15.6
60°-70°	447.9	11.6
70°-80°	254.9	6.6
80°-90°	72.5	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°	1117.7	29.0
0°-40°	1798.7	46.6
0°-60°	3084.6	79.9
0°-90°	3859.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3859.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1483	1483	1483	1483	1483	
5°	1484	1478	1464	1477	1474	141
15°	1413	1408	1391	1402	1394	398
25°	1283	1275	1259	1260	1256	591
35°	1110	1102	1085	1078	1071	694
45°	909	904	888	872	866	702
55°	690	689	672	658	652	618
65°	471	464	451	441	437	464
75°	249	244	240	233	230	266
85°	66	64	64	61	61	76
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1483.1	1483.1	1483.1	1483.1	1483.1
2.5°	1489.5	1484.4	1470.4	1483.1	1481.8
5°	1484.4	1478.0	1464.0	1476.7	1474.2
7.5°	1472.9	1466.5	1452.5	1464.0	1462.7
10°	1457.6	1451.2	1434.7	1446.1	1443.6
12.5°	1437.2	1432.1	1416.8	1424.4	1423.2
15°	1413.0	1407.9	1391.3	1401.5	1393.8
17.5°	1386.2	1379.8	1363.2	1370.9	1368.3
20°	1355.6	1347.9	1331.4	1336.5	1332.6
22.5°	1321.2	1313.5	1296.9	1300.7	1295.6
25°	1282.9	1275.2	1258.7	1259.9	1256.1
27.5°	1243.4	1235.7	1217.9	1219.1	1215.3
30°	1200.0	1193.6	1175.8	1175.8	1166.8
32.5°	1156.6	1147.7	1135.0	1126.0	1122.2
35°	1109.5	1101.8	1085.2	1077.6	1071.2
37.5°	1062.3	1052.1	1035.5	1026.6	1022.7
40°	1012.5	1004.9	987.0	976.8	971.7
42.5°	962.8	953.9	936.0	925.8	920.7
45°	909.2	904.1	887.6	872.3	865.9
47.5°	857.0	849.3	834.0	818.7	813.6
50°	803.4	797.0	780.4	766.4	758.8
52.5°	747.3	743.5	725.6	714.1	706.5
55°	689.9	688.6	672.1	658.0	651.7
57.5°	636.3	631.2	618.5	605.7	598.1
60°	577.7	576.4	561.1	549.6	543.3
62.5°	525.4	521.6	506.3	494.8	491.0
65°	470.6	464.2	451.4	441.2	437.4
67.5°	411.9	406.8	396.6	387.7	382.6
70°	359.6	352.0	344.3	335.4	329.0
72.5°	304.8	299.7	290.8	283.1	280.6
75°	248.7	243.6	239.7	233.4	229.5
77.5°	198.9	196.4	191.3	186.2	186.2
80°	150.5	146.7	144.1	142.8	142.8
82.5°	103.3	103.3	103.3	100.7	99.5
85°	66.3	63.8	63.8	61.2	61.2
87.5°	33.2	29.3	28.1	26.8	26.8
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	21.40	23.01	21.76	23.33	23.64	21.08	22.70	21.45	23.01	23.33
	3H	23.17	24.63	23.54	24.95	25.31	22.80	24.26	23.17	24.59	24.95
	4H	23.82	25.20	24.22	25.55	25.92	23.43	24.81	23.83	25.16	25.53
	6H	24.31	25.59	24.72	25.95	26.34	23.92	25.20	24.33	25.56	25.95
	8H	24.46	25.68	24.89	26.07	26.47	24.08	25.30	24.50	25.69	26.09
	12H	24.57	25.74	25.00	26.12	26.55	24.19	25.35	24.62	25.74	26.16
4H	2H	21.97	23.35	22.37	23.70	24.07	21.72	23.10	22.12	23.45	23.83
	3H	23.97	25.12	24.38	25.52	25.92	23.66	24.82	24.07	25.21	25.61
	4H	24.75	25.80	25.18	26.21	26.65	24.42	25.47	24.85	25.88	26.32
	6H	25.37	26.28	25.82	26.72	27.18	25.04	25.95	25.49	26.39	26.84
	8H	25.57	26.43	26.03	26.87	27.33	25.24	26.10	25.70	26.54	27.00
	12H	25.72	26.49	26.20	26.97	27.44	25.39	26.16	25.87	26.63	27.10
8H	4H	25.04	25.89	25.50	26.33	26.80	24.75	25.60	25.21	26.04	26.51
	6H	25.77	26.48	26.27	26.97	27.45	25.48	26.19	25.97	26.68	27.15
	8H	26.05	26.69	26.56	27.19	27.68	25.76	26.40	26.27	26.90	27.39
	12H	26.28	26.84	26.78	27.33	27.89	25.98	26.55	26.49	27.04	27.60
12H	4H	25.07	25.83	25.55	26.31	26.78	24.78	25.55	25.26	26.02	26.49
	6H	25.82	26.46	26.33	26.97	27.45	25.54	26.18	26.05	26.69	27.17
	8H	26.16	26.72	26.66	27.21	27.77	25.88	26.44	26.39	26.94	27.50