

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P931324

Luminaire Tested: DFN2DS-TR3F0-030DS850-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P931324
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333882)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-TR3F0-030DS850-RLL
Description: 3 foot, Triangle Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

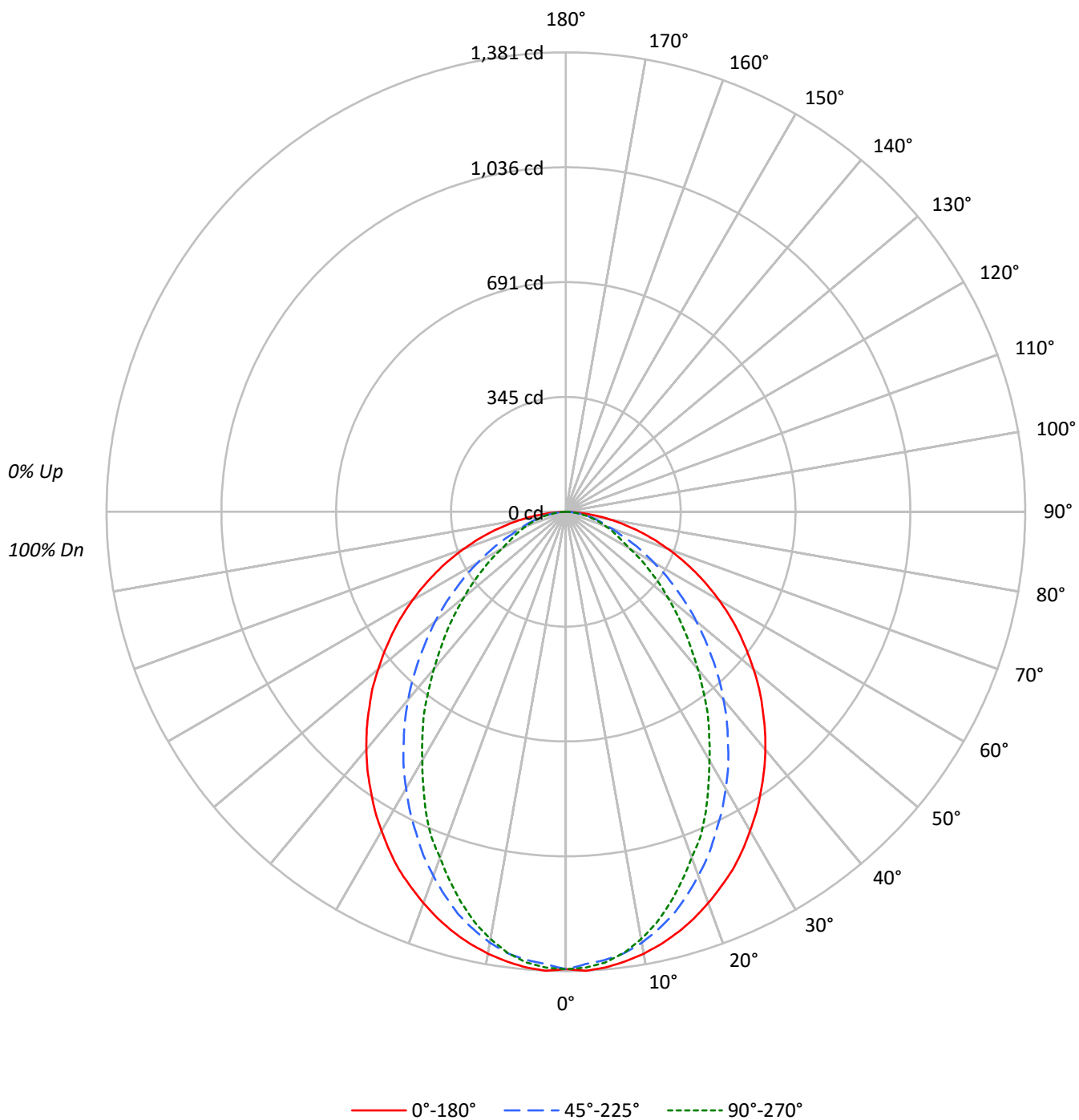
Lumens per Lamp: N/A
Luminaire Lumens: 2827.9 lumens
Efficiency: N/A
Efficacy: 100.3 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 3.16' x L: 2.74' x H: 0')
CIE Type: Direct

Input Watts (W): 28.2
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9968
Total Harmonic Distortion (THDi): 0.064
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

TEST NUMBER: P931324

CATALOG NUMBER: DFN2DS-TR3F0-030DS850-RLL

Luminous Intensity Polar Plot



TEST NUMBER: P931324

CATALOG NUMBER: DFN2DS-TR3F0-030DS850-RLL

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10		50	30	10		50
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111		106	106	106		102
1	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1713	1713	1713
5°	1720	1692	1701
10°	1707	1664	1650
15°	1687	1615	1568
20°	1660	1544	1467
25°	1632	1465	1369
30°	1594	1382	1243
35°	1556	1293	1132
40°	1518	1200	1004
45°	1474	1097	888
50°	1428	992	774
55°	1381	878	665
60°	1327	760	552
65°	1266	638	503
70°	1192	526	462
75°	1102	480	431
80°	973	428	393
85°	765	337	337

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 1474 cd/sqm

TEST NUMBER: P931324

CATALOG NUMBER: DFN2DS-TR3F0-030DS850-RLL

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	128.9	4.6
10°-20°	353.8	12.5
20°-30°	496.7	17.6
30°-40°	541.4	19.1
40°-50°	497.6	17.6
50°-60°	390.8	13.8
60°-70°	254.4	9.0
70°-80°	130.9	4.6
80°-90°	33.4	1.2
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°	979.3	34.6
0°-40°	1520.7	53.8
0°-60°	2409.2	85.2
0°-90°	2827.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2827.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1375	1375	1375	1375	1375	
5°	1375	1369	1353	1364	1360	130
15°	1308	1294	1252	1228	1216	369
25°	1187	1147	1065	1014	995	546
35°	1023	959	850	772	744	640
45°	836	753	622	534	504	646
55°	636	539	404	330	306	568
65°	429	328	216	174	170	426
75°	229	142	100	91	90	242
85°	54	27	24	24	24	64
90°	0	0	0	0	0	

TEST NUMBER: P931324

CATALOG NUMBER: DFN2DS-TR3F0-030DS850-RLL

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1375.0	1375.0	1375.0	1375.0	1375.0
2.5°	1381.3	1375.0	1361.3	1373.8	1371.4
5°	1375.0	1368.8	1352.6	1363.8	1360.1
7.5°	1363.8	1356.4	1339.0	1343.9	1337.7
10°	1348.9	1340.2	1315.4	1311.5	1304.2
12.5°	1330.2	1319.0	1285.4	1278.0	1264.3
15°	1307.8	1294.1	1251.8	1228.2	1215.8
17.5°	1281.7	1261.8	1209.5	1182.2	1162.2
20°	1251.8	1226.9	1164.7	1133.7	1106.2
22.5°	1219.6	1190.8	1118.6	1076.4	1057.8
25°	1187.2	1147.3	1065.2	1014.2	995.4
27.5°	1148.6	1106.2	1015.4	957.0	928.2
30°	1107.6	1060.2	960.6	897.3	863.6
32.5°	1067.6	1010.4	908.5	833.7	802.6
35°	1022.9	959.4	849.9	771.5	744.1
37.5°	979.4	910.8	795.2	709.2	678.3
40°	933.3	858.7	737.9	649.5	617.3
42.5°	886.0	806.5	680.7	588.5	557.5
45°	836.3	752.8	622.3	533.8	503.9
47.5°	788.9	700.7	566.3	477.8	450.5
50°	736.7	648.3	511.5	425.5	399.5
52.5°	685.6	592.3	459.2	377.1	353.4
55°	635.8	538.8	404.3	329.8	306.2
57.5°	584.9	485.3	356.0	286.2	266.3
60°	532.5	433.1	304.9	241.4	221.6
62.5°	481.6	382.1	261.3	201.6	191.7
65°	429.3	328.5	216.5	174.2	170.5
67.5°	379.6	278.7	174.2	153.0	149.3
70°	327.3	230.2	144.3	131.9	126.9
72.5°	277.5	185.3	120.7	110.8	108.2
75°	228.9	141.8	99.6	90.8	89.6
77.5°	180.4	100.7	78.4	73.4	70.9
80°	135.6	72.2	59.7	54.8	54.8
82.5°	94.5	48.6	41.0	38.6	38.6
85°	53.5	27.3	23.6	23.6	23.6
87.5°	20.0	9.9	9.9	8.8	8.8
90°	0.0	0.0	0.0	0.0	0.0

TEST NUMBER: P931324

CATALOG NUMBER: DFN2DS-TR3F0-030DS850-RLL

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	13.11	14.63	13.47	14.94	15.26	9.07	10.59	9.43	10.90	11.22
	3H	14.87	16.24	15.25	16.56	16.93	10.33	11.70	10.71	12.02	12.39
	4H	15.54	16.82	15.94	17.17	17.54	10.83	12.11	11.23	12.46	12.84
	6H	16.03	17.21	16.44	17.58	17.97	11.21	12.40	11.63	12.76	13.15
	8H	16.19	17.32	16.62	17.71	18.11	11.34	12.46	11.76	12.85	13.26
	12H	16.29	17.37	16.72	17.75	18.18	11.42	12.50	11.85	12.88	13.31
4H	2H	13.21	14.49	13.61	14.84	15.22	9.76	11.04	10.16	11.39	11.77
	3H	15.14	16.21	15.55	16.61	17.01	11.20	12.27	11.62	12.67	13.07
	4H	15.89	16.85	16.32	17.26	17.70	11.80	12.76	12.24	13.18	13.61
	6H	16.48	17.32	16.94	17.76	18.22	12.29	13.12	12.75	13.57	14.03
	8H	16.70	17.48	17.16	17.92	18.39	12.45	13.23	12.92	13.68	14.14
	12H	16.85	17.55	17.33	18.02	18.50	12.57	13.27	13.05	13.74	14.22
8H	4H	15.92	16.69	16.38	17.14	17.61	12.16	12.93	12.62	13.38	13.85
	6H	16.55	17.20	17.05	17.69	18.16	12.74	13.39	13.24	13.88	14.36
	8H	16.80	17.38	17.32	17.89	18.38	12.97	13.54	13.48	14.05	14.54
	12H	17.01	17.52	17.52	18.01	18.57	13.14	13.65	13.65	14.15	14.71
12H	4H	15.90	16.60	16.38	17.07	17.54	12.20	12.90	12.68	13.37	13.84
	6H	16.53	17.11	17.05	17.62	18.11	12.81	13.39	13.32	13.89	14.38
	8H	16.82	17.33	17.33	17.82	18.39	13.08	13.59	13.59	14.08	14.65