

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: P930917

Luminaire Tested: DFN2DS-SQ3F0-040DS940-FLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930917
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P333812)
Test Lab: INNOVATION CENTER
Issue Date: 11/20/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: DFN2DS-SQ3F0-040DS940-FLL
Description: 3 foot, Square Define Geo, with Direct Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

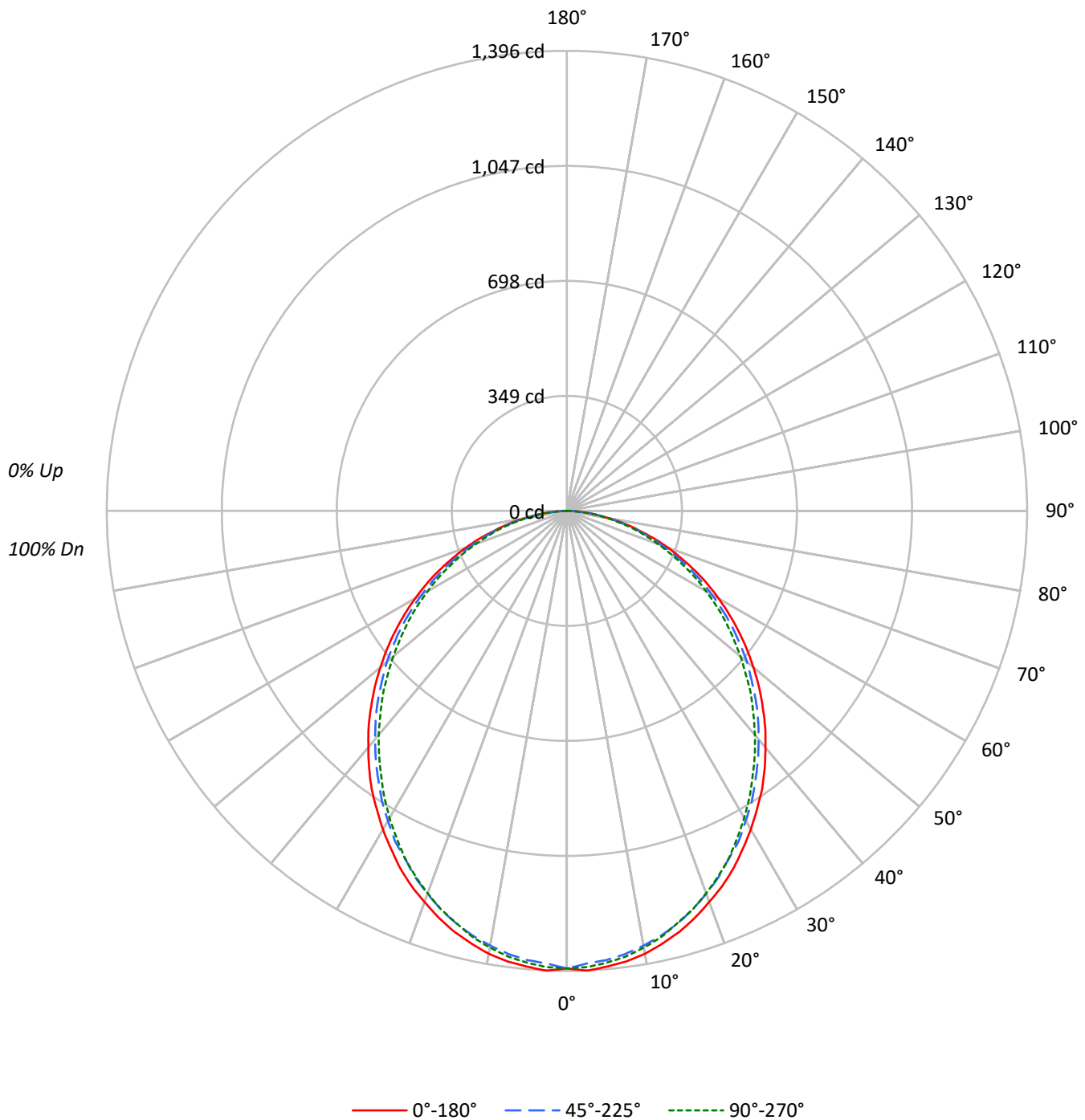
Lumens per Lamp: N/A
Luminaire Lumens: 3532.3 lumens
Efficiency: N/A
Efficacy: 92.7 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.16 / 1.29
Luminous Opening: Rectangular (W 3.06' x L: 3.06' x H: 0')
CIE Type: Direct

Input Watts (W): 38.1
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9933
Total Harmonic Distortion (THDi): 0.066
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
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	109	104	100	96	106	102	98	95	98	95	92		94	91	89		90
2	99	91	85	79	97	89	83	78	86	81	76		83	78	74		80
3	91	80	72	66	88	79	71	65	76	69	64		73	68	63		71
4	83	71	63	56	81	70	62	56	68	61	55		65	59	54		63
5	77	64	55	49	75	63	55	48	61	53	48		59	52	47		57
6	71	58	49	43	69	57	48	42	55	48	42		53	47	42		52
7	66	52	44	38	64	52	43	38	50	43	37		49	42	37		47
8	61	48	40	34	60	47	39	34	46	39	33		45	38	33		44
9	57	44	36	30	56	43	36	30	42	35	30		41	35	30		40
10	54	41	33	28	53	40	33	28	39	32	27		38	32	27		37

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1591	1591	1591
5°	1597	1574	1583
10°	1587	1558	1566
15°	1568	1538	1536
20°	1540	1507	1506
25°	1512	1470	1470
30°	1477	1436	1424
35°	1444	1395	1374
40°	1402	1354	1328
45°	1361	1313	1281
50°	1316	1271	1226
55°	1270	1222	1176
60°	1218	1163	1120
65°	1162	1104	1054
70°	1091	1033	984
75°	993	951	928
80°	881	854	810
85°	719	685	614

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
Vertical Angle: 45°
Luminance: 1361 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.7	3.7
10°-20°	367.6	10.4
20°-30°	540.3	15.3
30°-40°	627.5	17.8
40°-50°	626.8	17.7
50°-60°	546.5	15.5
60°-70°	404.0	11.4
70°-80°	228.6	6.5
80°-90°	60.3	1.7
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°	1038.6	29.4
0°-40°	1666.2	47.2
0°-60°	2839.4	80.4
0°-90°	3532.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3532.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1388	1388	1388	1388	1388	
5°	1388	1383	1368	1379	1376	132
15°	1322	1314	1296	1302	1295	372
25°	1196	1186	1163	1165	1163	550
35°	1032	1019	997	989	982	644
45°	840	830	810	796	790	648
55°	636	627	612	595	589	568
65°	429	420	407	395	389	424
75°	224	222	215	207	210	239
85°	55	53	52	48	47	64
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1388.3	1388.3	1388.3	1388.3	1388.3
2.5°	1396.4	1389.7	1375.0	1388.3	1385.8
5°	1388.3	1383.0	1368.3	1378.9	1376.4
7.5°	1378.9	1371.0	1356.3	1367.1	1364.4
10°	1364.4	1355.0	1339.1	1349.7	1345.7
12.5°	1344.2	1336.3	1320.3	1327.0	1324.3
15°	1321.6	1313.6	1296.3	1301.6	1295.0
17.5°	1293.6	1285.6	1268.2	1274.8	1268.2
20°	1262.8	1254.9	1236.2	1240.1	1235.0
22.5°	1232.2	1220.2	1202.8	1202.8	1200.1
25°	1196.1	1185.5	1162.8	1165.4	1162.8
27.5°	1156.0	1146.7	1129.5	1125.4	1118.8
30°	1116.1	1105.4	1085.4	1081.4	1076.0
32.5°	1073.3	1065.4	1044.0	1036.0	1030.5
35°	1032.0	1018.7	997.3	989.2	982.5
37.5°	985.2	973.2	951.8	942.5	935.8
40°	937.2	926.4	905.0	893.2	887.8
42.5°	890.5	879.7	858.5	845.0	837.1
45°	839.7	830.5	810.3	795.8	790.3
47.5°	790.3	780.9	759.6	744.9	737.0
50°	738.2	731.5	712.9	694.2	687.5
52.5°	687.5	678.2	660.9	646.2	636.8
55°	635.6	627.4	611.5	595.4	588.8
57.5°	583.4	576.8	559.3	543.3	538.0
60°	531.3	526.0	507.4	492.7	488.6
62.5°	480.6	471.2	458.0	444.6	439.2
65°	428.6	420.5	407.2	395.2	388.6
67.5°	375.2	368.4	356.5	347.2	341.8
70°	325.8	320.4	308.4	299.0	293.7
72.5°	275.1	269.7	263.1	253.7	249.7
75°	224.2	221.7	214.9	206.9	209.6
77.5°	178.8	173.5	170.8	166.8	162.9
80°	133.5	132.1	129.4	125.5	122.8
82.5°	90.8	90.8	89.6	84.1	84.1
85°	54.7	53.4	52.1	48.0	46.7
87.5°	24.1	21.4	18.7	14.7	13.3
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	12.90	14.51	13.26	14.82	15.13	12.45	14.06	12.82	14.38	14.69
	3H	14.65	16.10	15.02	16.43	16.79	14.15	15.61	14.53	15.94	16.30
	4H	15.29	16.66	15.69	17.01	17.39	14.80	16.17	15.20	16.51	16.89
	6H	15.76	17.03	16.17	17.39	17.78	15.26	16.53	15.67	16.89	17.28
	8H	15.90	17.11	16.33	17.50	17.90	15.40	16.61	15.83	17.00	17.40
	12H	15.99	17.15	16.42	17.54	17.96	15.48	16.64	15.91	17.02	17.45
4H	2H	13.46	14.83	13.85	15.17	15.55	13.10	14.47	13.50	14.82	15.20
	3H	15.43	16.58	15.84	16.98	17.38	15.02	16.17	15.43	16.57	16.97
	4H	16.21	17.24	16.64	17.66	18.09	15.78	16.82	16.21	17.23	17.67
	6H	16.80	17.71	17.26	18.15	18.61	16.37	17.28	16.83	17.72	18.17
	8H	16.99	17.84	17.45	18.28	18.75	16.56	17.40	17.02	17.84	18.31
	12H	17.13	17.89	17.61	18.36	18.83	16.67	17.43	17.15	17.91	18.38
8H	4H	16.48	17.33	16.94	17.77	18.24	16.11	16.95	16.57	17.40	17.86
	6H	17.19	17.90	17.69	18.39	18.86	16.81	17.52	17.31	18.00	18.48
	8H	17.45	18.08	17.96	18.59	19.08	17.06	17.69	17.57	18.20	18.69
	12H	17.65	18.21	18.16	18.70	19.26	17.24	17.80	17.75	18.29	18.85
12H	4H	16.51	17.27	16.99	17.74	18.21	16.14	16.90	16.62	17.38	17.85
	6H	17.24	17.87	17.75	18.38	18.87	16.87	17.50	17.38	18.01	18.50
	8H	17.55	18.11	18.06	18.60	19.16	17.18	17.73	17.68	18.22	18.79