

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: P930800

Luminaire Tested: DFN2DS-SQ2F0-030DS840-RLL

Issue Date: 11/20/2024

Test Information

Test Method: LM-79-2019
Report Number: P930800
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-SQ2F0-030DS840-RLL
Description: 2 foot, Square Define Geo, with Direct 1in Regressed Frosted Lens
Light Source: -
Ballast/Driver: -

Summary

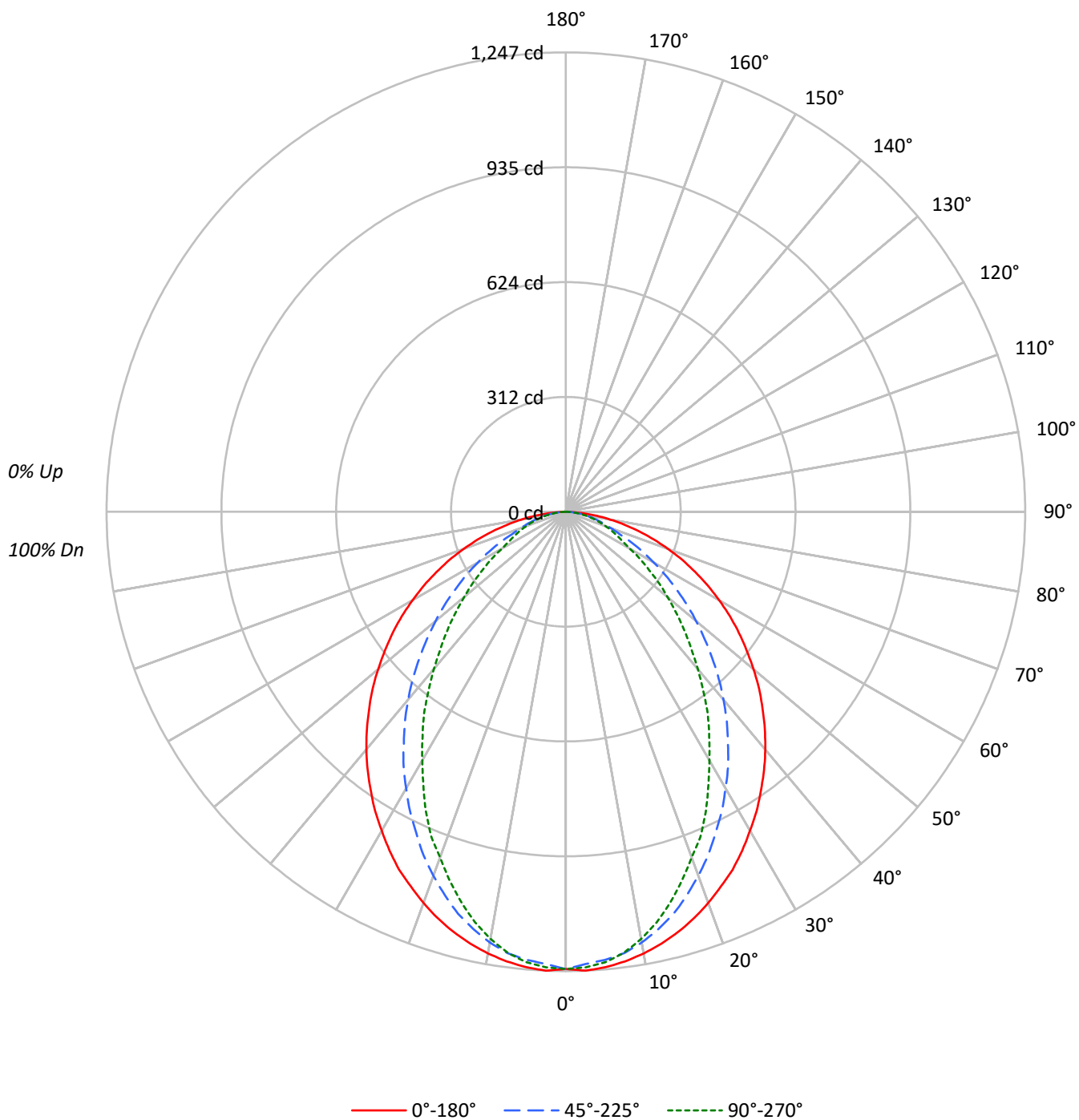
Lumens per Lamp: N/A
Luminaire Lumens: 2552.5 lumens
Efficiency: N/A
Efficacy: 95.6 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 0.99 / 1.16
Luminous Opening: Rectangular (W 2.21' x L: 2.21' x H: 0')
CIE Type: Direct

Input Watts (W): 26.7
Input Voltage (V):
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: 0.9963
Total Harmonic Distortion (THDi): 0.065
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	110	106	102	98	107	103	100	97	99	96	94		95	93	91		92	90	88	86
2	101	94	87	82	98	92	86	81	88	83	79		85	81	78		82	79	76	74
3	93	83	76	70	90	82	75	69	79	73	68		76	71	67		74	69	66	64
4	86	75	66	60	83	73	66	60	71	64	59		69	63	58		66	62	57	55
5	79	67	59	53	77	66	58	52	64	57	52		62	56	51		60	55	51	49
6	74	61	53	47	72	60	52	46	58	51	46		57	50	46		55	50	45	43
7	68	56	47	42	67	55	47	42	53	46	41		52	46	41		51	45	41	39
8	64	51	43	38	62	51	43	37	49	42	37		48	42	37		47	41	37	35
9	60	47	39	34	59	47	39	34	46	39	34		44	38	34		44	38	34	32
10	56	44	36	31	55	43	36	31	42	36	31		41	35	31		41	35	31	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2729	2729	2729
5°	2739	2695	2710
10°	2718	2651	2628
15°	2687	2572	2498
20°	2644	2460	2337
25°	2600	2333	2180
30°	2538	2202	1979
35°	2478	2059	1803
40°	2418	1912	1599
45°	2348	1747	1415
50°	2275	1579	1234
55°	2200	1399	1060
60°	2114	1210	880
65°	2016	1017	801
70°	1899	837	736
75°	1755	764	687
80°	1550	683	626
85°	1216	537	537

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°

Vertical Angle: 45°

Luminance: 2348 cd/sqm

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	116.3	4.6
10°-20°	319.3	12.5
20°-30°	448.3	17.6
30°-40°	488.7	19.1
40°-50°	449.2	17.6
50°-60°	352.7	13.8
60°-70°	229.6	9.0
70°-80°	118.2	4.6
80°-90°	30.2	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°	884.0	34.6
0°-40°	1372.7	53.8
0°-60°	2174.6	85.2
0°-90°	2552.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2552.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1241	1241	1241	1241	1241	
5°	1241	1236	1221	1231	1228	118
15°	1180	1168	1130	1109	1097	333
25°	1072	1036	962	915	898	493
35°	923	866	767	696	672	578
45°	755	680	562	482	455	583
55°	574	486	365	298	276	513
65°	388	296	195	157	154	384
75°	207	128	90	82	81	219
85°	48	25	21	21	21	58
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1241.1	1241.1	1241.1	1241.1	1241.1
2.5°	1246.7	1241.1	1228.7	1240.0	1237.8
5°	1241.1	1235.5	1220.9	1231.0	1227.6
7.5°	1231.0	1224.3	1208.6	1213.0	1207.4
10°	1217.5	1209.7	1187.3	1183.8	1177.2
12.5°	1200.7	1190.6	1160.3	1153.6	1141.1
15°	1180.5	1168.1	1129.9	1108.6	1097.4
17.5°	1156.9	1138.9	1091.7	1067.1	1049.0
20°	1129.9	1107.4	1051.3	1023.3	998.5
22.5°	1100.8	1074.9	1009.7	971.6	954.8
25°	1071.6	1035.5	961.5	915.4	898.5
27.5°	1036.7	998.5	916.5	863.8	837.8
30°	999.7	957.0	867.1	809.9	779.5
32.5°	963.7	912.0	820.0	752.6	724.4
35°	923.3	866.0	767.2	696.4	671.7
37.5°	884.0	822.1	717.7	640.1	612.2
40°	842.4	775.1	666.1	586.3	557.2
42.5°	799.7	727.9	614.4	531.2	503.2
45°	754.9	679.5	561.7	481.8	454.9
47.5°	712.1	632.4	511.1	431.2	406.6
50°	665.0	585.2	461.7	384.1	360.6
52.5°	618.8	534.6	414.5	340.3	319.0
55°	573.9	486.3	365.0	297.7	276.4
57.5°	527.9	438.0	321.3	258.4	240.3
60°	480.7	390.9	275.2	217.9	200.0
62.5°	434.7	344.8	235.8	182.0	173.1
65°	387.5	296.5	195.4	157.3	153.9
67.5°	342.6	251.6	157.3	138.1	134.7
70°	295.4	207.8	130.2	119.0	114.5
72.5°	250.5	167.3	108.9	100.0	97.7
75°	206.6	128.0	89.9	82.0	80.9
77.5°	162.9	90.9	70.8	66.3	64.0
80°	122.4	65.2	53.9	49.4	49.4
82.5°	85.3	43.8	37.0	34.8	34.8
85°	48.2	24.6	21.3	21.3	21.3
87.5°	18.0	8.9	8.9	7.9	7.9
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	14.72	16.24	15.09	16.56	16.87	10.68	12.21	11.05	12.52	12.83
	3H	16.49	17.85	16.87	18.18	18.54	11.95	13.31	12.33	13.64	14.00
	4H	17.15	18.43	17.55	18.78	19.16	12.45	13.73	12.85	14.08	14.46
	6H	17.64	18.83	18.06	19.19	19.58	12.83	14.01	13.24	14.38	14.77
	8H	17.81	18.93	18.23	19.32	19.73	12.96	14.08	13.38	14.47	14.87
	12H	17.91	18.99	18.34	19.37	19.80	13.04	14.11	13.47	14.50	14.93
4H	2H	14.83	16.11	15.23	16.46	16.83	11.38	12.66	11.78	13.01	13.39
	3H	16.76	17.82	17.17	18.22	18.62	12.82	13.88	13.23	14.28	14.69
	4H	17.51	18.47	17.94	18.88	19.32	13.42	14.38	13.85	14.79	15.23
	6H	18.10	18.93	18.56	19.38	19.84	13.91	14.74	14.37	15.18	15.64
	8H	18.32	19.09	18.78	19.54	20.00	14.07	14.85	14.53	15.29	15.76
	12H	18.47	19.16	18.95	19.64	20.11	14.19	14.88	14.67	15.36	15.83
8H	4H	17.53	18.31	18.00	18.75	19.22	13.78	14.55	14.24	15.00	15.46
	6H	18.17	18.81	18.67	19.30	19.78	14.36	15.00	14.86	15.50	15.97
	8H	18.42	19.00	18.94	19.51	20.00	14.58	15.16	15.10	15.67	16.16
	12H	18.62	19.13	19.13	19.63	20.19	14.76	15.27	15.27	15.76	16.33
12H	4H	17.52	18.21	18.00	18.69	19.16	13.82	14.51	14.30	14.99	15.46
	6H	18.15	18.73	18.67	19.24	19.73	14.42	15.00	14.94	15.51	16.00
	8H	18.44	18.95	18.95	19.44	20.00	14.70	15.21	15.21	15.70	16.26

END OF REPORT